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J-SEAD

**Multi-Service Procedures
for the
Joint Suppression of Enemy Air Defenses**

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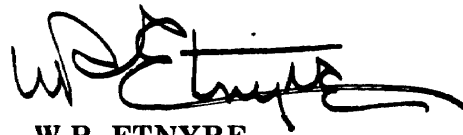


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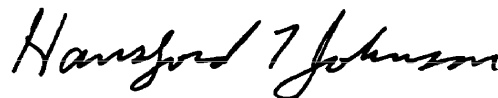
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19 June 1990

PREFACE

PURPOSE

This publication describes the concept and procedures for conducting J-SEAD operations against enemy surface-to-air defense systems.

SCOPE

This publication describes—

- The J-SEAD concept.
- J-SEAD planning and coordination responsibilities.
- The internal J-SEAD coordination and responsibilities of each service.

APPLICABILITY

This document applies to the Army, Marine Corps, **Navy**, Military Airlift Command, and Tactical Air Forces. They will use it in the conduct of J-SEAD training and combat operations. This document is **generic** and uses **agreed upon** joint doctrine and terminology as its foundation. The procedures apply to US unilateral operations only. For combined operations, applicable multinational procedures apply. These procedures may be modified to fit individual theater command and control needs, as well as international policy arrangements.

Although the US Navy is not a signatory to this publication, Navy information has been coordinated with the Headquarters, US Atlantic Fleet, N916.

IMPLEMENTATION PLAN

Participating major command offices of primary responsibility (OPRs) will review this publication for multi-service procedural information. Once they validate the information, OPRs should reference **and** incorporate it into their service—

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- Curricula.

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The Army will incorporate the doctrine and procedures in this publication into Army field manuals, training circulars, and curricula as directed by the commanding general, Training and Doctrine Command (TRADOC).

Marine Corps

The doctrine and procedures contained in this document will be incorporated in US Marine Corps doctrinal and training publications as directed by the Commandant of the Marine Corps (OPR: MAGTF, Warfighting Center).

Military Airlift Command

Headquarters, Military Airlift Command (MAC) will incorporate these procedures according to AFR 5-8 as limited to the MACR 50-, 51-, 55-, 105-, and 164-series. OPRs will review this document and determine applicability for use in the initial qualification/tactical aircrew training at the Combat Aircrew

Training School, Airlift Operations School, aircrew upgrade and continuation training programs, and combat support-related schools. (OPR: HQ MAC/DO/IN/SC/XO/XP).

Tactical Air Command

The Tactical Air Command (TAC) will incorporate these procedures according to HQ TAC OI 5-1 (OPR: HQ TAC/XPJ). USAFE, PACAF, and AAC will validate and incorporate appropriate procedures according to applicable MAJCOM and other governing directives.

Mission Employment Tactics (S·NF). MCM 3-1

Tactical Employment, Wild Weasel. Volume X.

Tactical Employment, Compass Call. Volume XVI.

The Tactical Air Control System (TACS)-Air Support Operations Center, (ASOC) and Tactical Air Control Parties (TACP). TACR 55-46.

Tactical Air Force Headquarters and Tactical Air Control Center. TACR 55-45.

USER INFORMATION

The TAC·TRADOC Air Land Forces Application (ALFA) Agency developed this publication with the joint participation of the approving service commands. ALFA will review and update this publication as necessary.

We encourage you to recommend changes for improving this publication. Key your comments to the specific page and paragraph, and provide a reason for each recommendation. Send changes or comments to—

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Unless this publication states otherwise, masculine pronouns do not refer exclusively to men.

In this publication references to the *battlefield coordination element (BCE)* [USA], *the tactical air control center* [AF/USN], and the *tactical air command center* [USMC] always imply the possibility of a functional equivalent.

EXECUTIVE SUMMARY

J-SEAD

Multi-Service Procedures for the Joint Suppression of Enemy Air Defenses

Air, ground, and naval forces must work together to fight and win today's battles. Ground and naval commanders rely on air support to help them accomplish their mission. Technological improvements in enemy air defenses present a serious challenge to the combat effectiveness of friendly tactical aviation. The battle against the enemy air defense system includes the suppression of enemy air defenses (SEAD), defined as—

That activity which neutralizes, destroys, or temporarily **degrades** enemy air defenses in a specific area by physical attack and/or electronic warfare."

The suppression of enemy air defenses reduces the capabilities of enemy surface-air defenses, thereby reducing the attrition of friendly air resources and increasing the overall effectiveness of friendly operations. The term J-SEAD is broad and all-encompassing, referring to all SEAD activities (unilateral and multi-service) that support the overall theater campaign plan of the joint force commander (JFC).

In the past, our forces have practiced J-SEAD to varying degrees without formalized four-service concepts or procedures. This pamphlet describes the approved J-SEAD concept and basic procedures for the Army, the Marine Corps, the Navy, the Military Airlift Command, and the Tactical Air Forces. This publication details the threat, command and control, suppression operations, J-SEAD coordination, and service-unique responsibilities and functions.

THREAT AND RESPONSE

Chapter I delineates the scope and objectives of J-SEAD and briefly describes the Soviet air defense threat as an example to illustrate the need for J-SEAD. J-SEAD is described as an effective way to counter the air defense threat, while increasing the effectiveness of friendly operations. The three categories of J-SEAD discussed are campaign plan, localized, and complementary.

COMMAND AND CONTROL

The JFC provides the guidance for J-SEAD operations to the service component commanders. This guidance covers such areas as enemy air defenses, joint force objectives, J-SEAD objectives, planning resources, and procedures. The joint force air component commander (JFACC), when designated, supports the JFC by planning, coordinating, allocating, and assigning J-SEAD tasks. This manual addresses the JFACC as the commander normally responsible for J-SEAD planning. If a JFACC is not appointed, the JFC retains these responsibilities. Component commanders develop their own concepts, assign missions, and allocate resources. The J-SEAD process consists of a planning phase and an execution phase.

**Dictionary of Military and Associated Terms*, JCS Publication 1-02, 1 January 1986.

SUPPRESSION OPERATIONS

There are three categories of J-SEAD: campaign plan, localized, and complementary. Campaign plan J-SEAD is planned to suppress long range surface-to-air missiles and early warning and acquisition radar that usually influence wide areas of operations. Localized J-SEAD applies to limited areas, times, and tactical targets. It seeks to protect friendly aircraft conducting air operations. Complementary J-SEAD is unplanned. It includes self-defense and attacks against targets of opportunity. The JFC establishes the rules of engagement for complementary suppression.

J-SEAD COORDINATION

J-SEAD involves coordination within and among the services. The Army normally coordinates with other components at the echelons above corps level: theater army or Army group. Army battlefield coordination elements (or their equivalents) provide the interface for tactical air and other service support requirements.

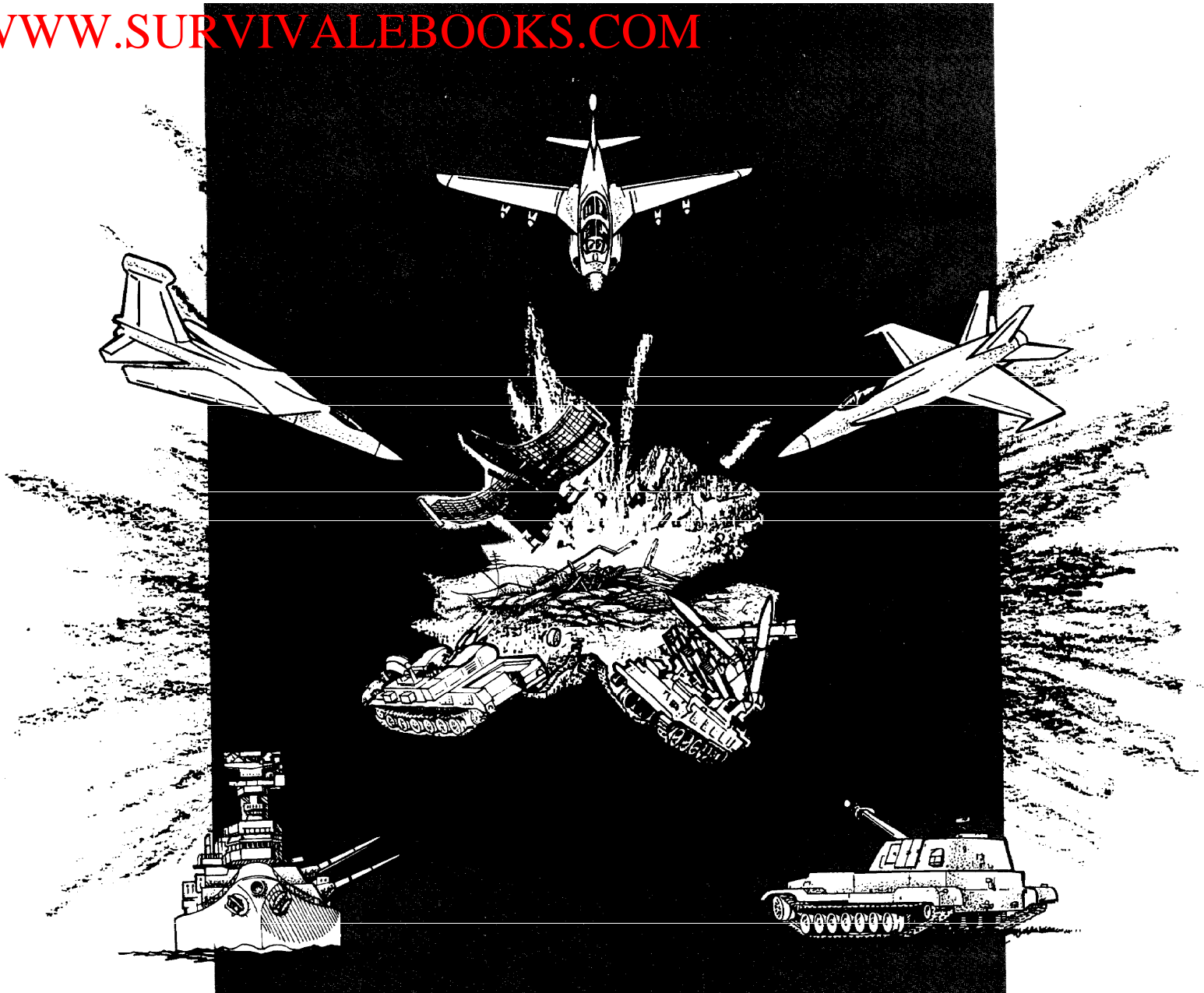
The Marine Corps supports J-SEAD with elements of Marine air-ground task forces. These elements provide internal and external coordination. Aviation combat elements and the ground commanders' fire support cells coordinate operational and intelligence support for Marine J-SEAD. Air, artillery, and naval gunfire liaison officers participate in J-SEAD planning, usually at fire support coordination centers. The Marine Air Command and Control System provides command and control for air operations with assigned sectors. Specific Marine elements involved in J-SEAD are the tactical air control center, the tactical air operations center, the direct air support center, and the tactical air control party.

For the Navy, the strike warfare commander is the battle force or group commander. The strike warfare commander is responsible for J-SEAD coordination.

For the Air Force, the tactical air control system supports the Air Force component commander. The tactical air control center coordinates J-SEAD operations. The Military Airlift Command, which requires extensive J-SEAD support, coordinates via the theater airlift control center, the joint rescue coordination center, and the Air Force special operations component.

SERVICE-UNIQUE RESPONSIBILITIES AND FUNCTIONS

Each service has key J-SEAD duty positions. Their responsibilities and functions appear in the appendix in a series of quick-reference tables.



CHAPTER 1. THREAT AND RESPONSE

In the battle against enemy air defense systems, “SEAD is that activity which neutralizes, destroys, or temporarily degrades enemy air defenses in a specific area by physical attack and/or electronic warfare.”¹ It reduces the capabilities of enemy surface-to-air defenses, thereby reducing the attrition of friendly air resources and increasing the overall effectiveness of friendly operations.

On a larger scale, the term *J-SEAD* is broad and all-encompassing, referring to all SEAD activities (unilateral and multi-service) supporting the overall theater campaign plan of the joint force commander (JFC). The objective of J-SEAD is to increase the overall effectiveness of friendly ground, air, and naval operations by reducing the capabilities of enemy air defenses, thereby increasing survivability of US air resources. J-SEAD is not an end unto itself but is planned and executed to enhance the effectiveness of the campaign plan and primary mission objectives.

¹JCS Publication 1-02.

The JFC provides these objectives and approves and monitors the execution of J-SEAD planning. If designated, the joint force air component commander (JFACC) has overall responsibility for coordinating the J-SEAD planning and target priorities. These responsibilities also include coordinating the development of localized J-SEAD threat priorities.

Joint suppression of enemy air defenses operations falls into three distinct categories: campaign plan, localized, and complementary. *Campaign plan J-SEAD* operations are those planned and conducted at the operational level of war against theater air defense systems that directly affect the JFC's theater campaign plan. *Localized J-SEAD* operations, however, have geographical and time limitations, and the targets are normally associated with the tactical level of war. *Complementary J-SEAD* is unplanned and includes self-defense and targets of opportunity.

THE THREAT

Soviet military doctrine combines all elements of modern military power, including a highly developed and extensive air defense system. These defenses provide a protective umbrella over each portion of Soviet ground and naval forces. The defenses may extend well forward of the Soviet forward line of own troops (FLOT) into friendly airspace. Soviet doctrine stresses the decisiveness of the offense and the importance of combined arms operations. The Soviets have exported this doctrine worldwide, making J-SEAD a concern in all theaters.

Following the concept of integrated air defense, Soviet doctrine for air defense units stresses the following tasks:

- Detection and warning of air threats.
- Destruction of aircraft well forward of Soviet-occupied territory.
- Jamming of navigation, communication, and target-acquisition system.
- Destruction or neutralization of aircraft that threaten Soviet troops.
- Deception and false targeting with decoys.

To accomplish these tasks, Soviet doctrine stresses rigid control over air defense activities. Air defense commanders located in remote command and control posts assign target priorities through overlapping and redundant communication links.

Soviet offensive doctrine stresses echeloning of forces in depth and includes the following air defense systems:

- Short-range systems (SA-1, SA-7, SA-8, SA-9, SA-13) that defend all echelons of regiments and divisions from very low- to medium-altitude attacks. These systems also defend command, control, and communications (C³) nodes; nuclear, biological, and chemical (NBC) delivery systems; lines of communications; logistics nodes; and airfields.
- Medium-range systems (SA-3, SA-6, SA-8) that defend each echelon and some installations from low- and medium-altitude attacks.
- Long-range systems (SA-2, SA-4, SA-5, SA-10, SA-11, SA-12) that defend key installations from medium- and high-altitude attack, provide overwatch of the first echelon army, and extend low- to high-altitude coverage into friendly airspace.

Figure 1-1 and 1-2 depict Soviet missile coverage.²

COUNTERMEASURES

The tactic of avoiding enemy air defenses by flying below radar coverage has become less effective. Flying low reduces air power effectiveness because it degrades air-to-ground communications and divides aircrew attention between terrain-avoidance and target-acquisition. Improved long-range air defenses have also reduced the effectiveness of our standoff systems by forcing us to operate further from the enemy FLOT. Therefore, J-SEAD operations will enhance our overall ability to carry out missions.

²*Soviet Military Power*, (Washington, DC: US Government Printing Office, 1987), 61, 74.

Soviet Long Range Surface-to-Air Air Defense Barrier from Fixed Sites

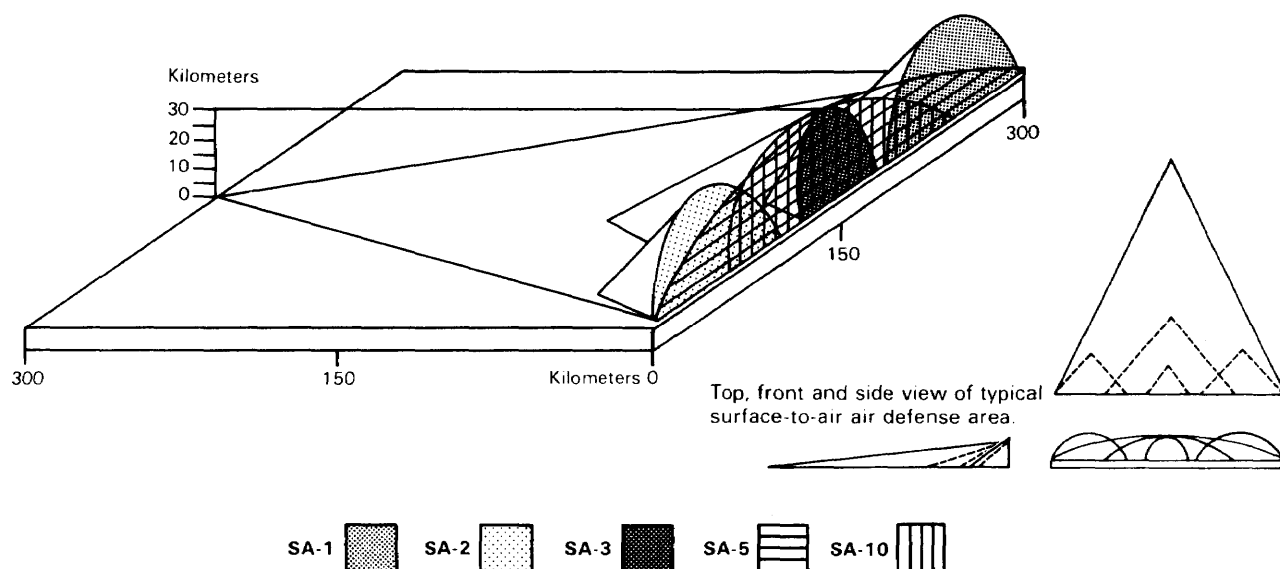


Figure 1-1. Soviet Long Systems

Soviet Mobile Tactical Surface-to-Air Air Defense of the Battlefield

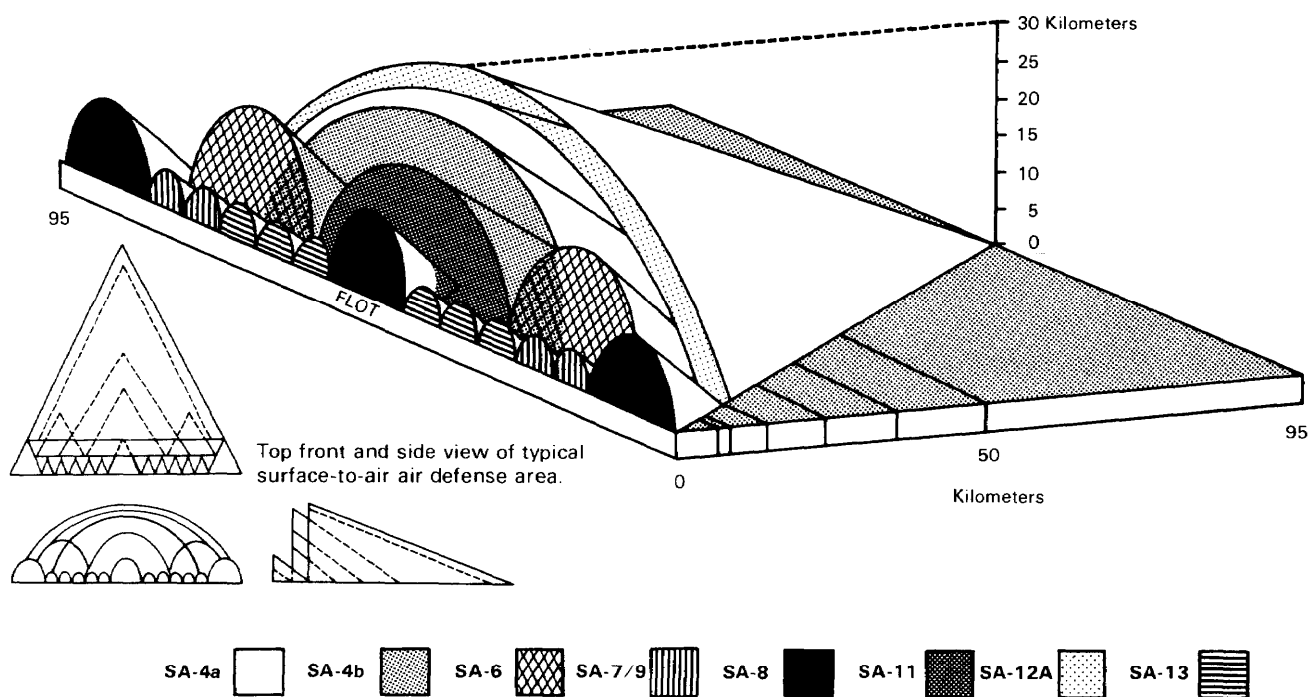


Figure 1-2. Soviet Mobile Tactical Systems

Modern warfare with joint forces requires that aircraft of all services operate in common airspace threatened by many enemy air defense systems. Historically, the service directly affected by the threat has assumed the responsibility for suppressing enemy air defense threats. Each service has its own unique capabilities to suppress enemy air defense systems.

Orchestrating the capabilities of all involved services requires a jointly coordinated, effective, and systematic program. This need led to the development of J-SEAD procedures, which are designed—

- To minimize duplication of effort.
- To promote timely decisions.
- To increase the overall effectiveness of friendly ground, air, and naval operations.

JOINT SUPPRESSION MEASURES

During J-SEAD operations, suppression assets are employed according to mission objectives, system capabilities, and the complexity of the suppression requirement. At the same time, duplication of effort is avoided while preserving unity of effort. Figure 1-3 lists some suppression capabilities available to the JFC. J-SEAD operations can be accomplished through destructive means, disruptive means, or a combination of both.

-
- Directed energy systems
 - Visual or sensor target-acquisition
 - Jamming support
 - Direct or indirect fires
 - Observed or unobserved fires
 - Antiradiation missiles
 - Precision munitions
 - Conventional munitions
 - Unmanned aerial vehicles
 - Special operations forces
 - Conventional forces
 - Obscurants
 - Deception
-

Figure 1-3. Suppression Capabilities

Destructive Means

Destructive means refers to the destruction of enemy air defenses. Its effects are cumulative and increase aircraft survivability. Destructive means, however, place large demands on combat power assets.

Disruptive Means

Disruptive means temporarily deny, degrade, deceive, delay, or neutralize enemy air defense personnel and systems. Disruptive means can be either active or passive. Active means include—

- Jamming.
- Chaff.
- Flares.
- Tactics such as deception, avoidance, or evasion flight profiles.
- Towed drones.

Passive means include use of—

- Camouflage.
- Infrared shielding.
- Warning receivers.
- Materiel design features.

Using disruptive means along with destructive means maximizes combat assets. Disruptive means complement destructive means most effectively when—

- Degrading jammable threats.
- Assisting destructive airborne suppression systems to suppress defense systems.
- Temporarily degrading or neutralizing enemy air defenses when destruction is not possible or feasible.
- Sustaining effects achieved by destructive suppression.

Mutual Support

When committing air assets, component commanders normally request mutual support from the other appropriate component commanders for—

- Electronic warfare (EW) assets that provide close-in jamming and standoff jamming of radar and communication signals. Component commanders should consider the effects of

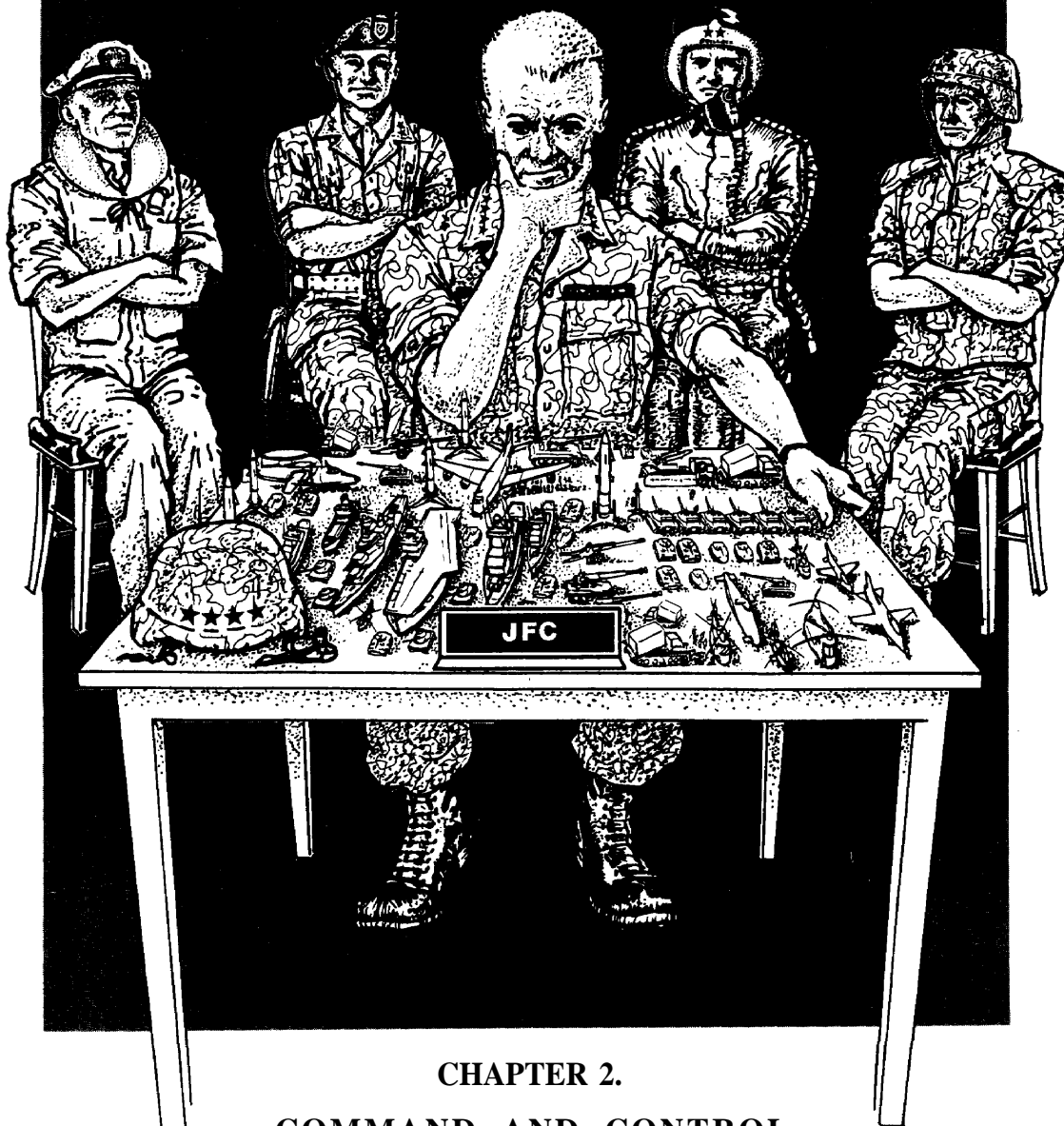
electromagnetic interference from friendly EW equipment when planning and executing J-SEAD.

- Reconnaissance and target-acquisition assets that provide specific coverage of the area of air operations.
- Rocket, artillery, missile, or naval gunfire in the area of air operations. All concerned should attempt to synchronize these fires with the movement of tactical aircraft to achieve the desired suppression and to reduce the chance of attrition of friendly forces.
- Attack helicopter fires on designated enemy targets, on target areas, or on targets of opportunity handed off from aircraft participating in a joint air operation.
- Mines delivered by artillery that preclude the movement of mobile air defense weapons until execution of a more precise attack.

- Synchronized ground force maneuvers to disrupt enemy air defenses in the zone of air operations.
- Direct or indirect fires on enemy air defense weapons.
- Obscurant support to degrade the ability of enemy air defenses to acquire targets.

Deception

Although suppression assets are limited, J-SEAD operations can also support the overall deception plan. J-SEAD, whether campaign plan or localized, can be a significant force-packaging decoy and an essential asset to the JFC in executing a deception plan. Consideration should be given to using such means as drones, decoys, and unmanned aerial vehicles as well as manipulative, simulative, and imitative communications or actions.



CHAPTER 2.

COMMAND AND CONTROL

Each service has unique suppression capabilities and responsibilities to support J-SEAD. These responsibilities involve numerous staff functions, for both the planning and the execution phases.

STAFF FUNCTIONS

Joint service planning and coordination provides the key to successful J-SEAD. This coordination relies upon several important staff positions.

Joint Force Commander and Staff

The highest planning level for J-SEAD operations is the JFC and his staff. The JFC provides general guidance for air, land, and naval operations. The JFC staff issues this guidance as the JFC's concept of operations, which includes all J-SEAD operations.

The JFC ensures that the J-SEAD campaign plan is published in a timely manner. The service component commanders must have the guidance and J-SEAD priorities in enough time to develop supporting plans.

This guidance should include at least—

- A brief narrative assessment of the enemy's C³ air defense systems.
- The JFC's specific objectives.
- The requirements for developing plans to meet joint force J-SEAD objectives.
- Guidance for planning resource use.
- A listing of assets retained at the joint force level and available by request for J-SEAD, such as special operations forces.
- Specific joint offensive or defensive objectives or both.
- Frequency deconfliction procedures and priorities.

The JFC's staff monitors J-SEAD through existing C³ facilities and evaluates the impact on both friendly and enemy activities.

Joint Force Director for Intelligence (J2)

The J2 staff must maintain a dynamic, theaterwide, all-source intelligence collection and analysis effort. This staff must develop a data base and, in concert with the J3, nominate a prioritized J-SEAD target list. The J2 staff can obtain intelligence support for J-SEAD from the appropriate external organizations.

Joint Force Director for Operations (J3)

The J3 has the responsibility to plan and evaluate the joint force operations and objectives. In planning J-SEAD operations, the J3 should—

- Ensure they are integrated into the operations planning process.
- Plan for combat personnel and assets necessary to support the J-SEAD effort.
- Maintain constant coordination with the other component services.
- Assist in developing the J-SEAD priority intelligence requirements.

- Obtain essential elements of friendly information to support the JFC's guidance and objectives.
- Support the JFACC (if designated) in developing J-SEAD planning priorities and threat lists.
- Review subordinate operations plans and concept plans to ensure compliance with JFC guidance.
- Coordinate with the J2 and other intelligence agencies.
- Know the quantity, operational status, and location of unique, dedicated, or specifically tasked J-SEAD support assets.
- Maintain staff responsibility for the joint targeting coordination board function.
- Establish communications architecture in coordination with the joint force director for communications-electronics.

Joint Targeting Coordination Board (JTCB)

The JFC may organize a JTCB to coordinate targeting information, provide targeting guidance and priorities, prepare and refine joint target lists, and deconflict lethal and nonlethal means. Chairmanship of the JTCB depends on command-specific regulations, but normally the J3 serves as chairman. It also consists of representatives of the J2, J5 (director for plans and operations), and other staff directorates and components. It should, at a minimum, include representatives of the Army, Marine Corps, Navy, and Air Force components, such as the TACC, ALCC, special operations, and electronic combat planning cells.

The JTCB meets daily to disseminate JFC targeting and electronic warfare guidance, monitor the effectiveness of targeting efforts, coordinate and deconflict all joint task force operations, validate no-fire areas, and approve new target nominations for inclusion in the joint target list. The JTCB should ensure that each component's operations are not only deconflicted but mutually support and focus on the JFC's campaign strategy. The JTCB is not intended to

replace the joint commander's electronic warfare staff. It should, however, integrate planning for lethal and nonlethal systems.

The results of the JTCB meeting should be provided to component or supporting forces. These include additions and changes to no-fire areas and to the joint target list, modifications to JFC's targeting and electronic warfare strategy, and summaries of combat assessment and target damage assessment reports received from component or supporting forces.

Joint Force Air Component Commander

The JFC may assign the responsibility for planning and coordinating the overall J-SEAD operation to the JFACC. If he does not designate a JFACC, then he retains overall responsibility for planning and coordinating the J-SEAD effort. This includes campaign plan J-SEAD target priorities and localized J-SEAD threat priority lists. Specific JFACC responsibilities for J-SEAD include—

- Planning and directing air support.
- Requesting support from another component service when required.
- Planning and coordinating air suppression efforts with ground and naval elements.
- Allocating supporting air sorties.

Planning and coordination responsibilities for J-SEAD vary according to which component service has the designated JFACC. See Table 2-1.

Because of the scope of air operations and the variety of missions to be performed, the JFACC may delegate detailed mission tasking, planning, and execution to subordinate organizations.

Component Commanders

Based upon JFC guidance, the other component commanders develop their own concept of operations, assign missions, and allocate resources. Specific considerations for J-SEAD include but are not limited to—

- Developing intelligence requirements.
- Collecting and distributing intelligence on enemy air defenses.
- Allocating available assets to support J-SEAD.
- Requesting SEAD support from other component commands.
- Coordinating J-SEAD objectives, priorities, and procedures with the JFC and other component services.
- Establishing procedures for monitoring mission results.
- Providing mission results to the JFC and other component services.

Table 2-1. J-SEAD Planning and Coordination

JFACC	Responsibilities of Other Components			
Component	Air Force	Army	Marine Corps	Navy
Air Force	TACC	BCE	CLE	CLE
Marine Corps	LOs	LOs	TACC	NAVLOs
Navy	LOs	LOs	MARLOs	TACC

BCE	battlefield coordination element [USA]	MARLO	Marine Corps liaison officer
CLE	coordinating liaison element or functional equivalent [USA]	NAVLO	Navy liaison officer
LO	liaison officer [USA and USAF]	TACC	tactical air command center [USMC] tactical air control center [USAF and USN]

PLANNING PHASE

Planning for J-SEAD parallels and complements the normal sequence of command and staff planning actions. When mission analysis begins, the commander and his staff must treat J-SEAD as a support requirement for joint force operations and objectives. Normally, they will integrate J-SEAD planning with the approved course of action (COA) and then incorporate it into the final plan. The JFC decides whether or not to conduct J-SEAD based on the initial mission analysis, joint and component staff inputs, and the enemy's capabilities.

Commander's Guidance

Following mission analysis, the JFC must give his staff enough initial guidance to begin working on the threat analysis and COAs to achieve the joint force mission objectives. The JFC may also provide specific J-SEAD guidance and objectives within the COAs. The joint force staff uses the commander's guidance as a starting point in preparing staff estimates.

Concept Development

The J3 develops multiple COAs to accomplish the JFC's mission objectives. As part of the COA development cycle, each proposed course of action must incorporate J-SEAD concepts. The J3 incorporates the J-SEAD concepts into the operations estimate and then presents the COAs to the JFC for his final selection. Weighing all known factors against his mission objectives, the JFC selects the COA with its J-SEAD objectives and concept for planning and execution. With this decision comes the next step: plan development.

Plan Development

Based on the JFC's selected COA, the J3 writes the basic concept of operations and the operations annexes. He should closely coordinate and refine the J-SEAD requirements and objectives with the JFACC, if designated, who develops the actual J-SEAD plan to be included in the joint force concept of operations. The concept of operations should optimize the joint force and component J-SEAD capabilities. The J3 must provide sufficient J-SEAD guidance to the components so they can write their own SEAD plans for supporting the joint force objectives and service component operations.

EXECUTION PHASE

Execution responsibility, by definition, is the requirement to locate and engage enemy air defense systems within J-SEAD areas of responsibility. System capabilities, supporting intelligence, threat suppression requirements, and mission objectives determine assignment of these J-SEAD execution areas.

Joint Force Commander

Joint suppression of enemy air defense operations usually occur at the component level. At the joint force level, J-SEAD functions involve primarily planning and evaluation. The planning and evaluation phase at the joint force level is an ongoing cycle consisting of three steps:

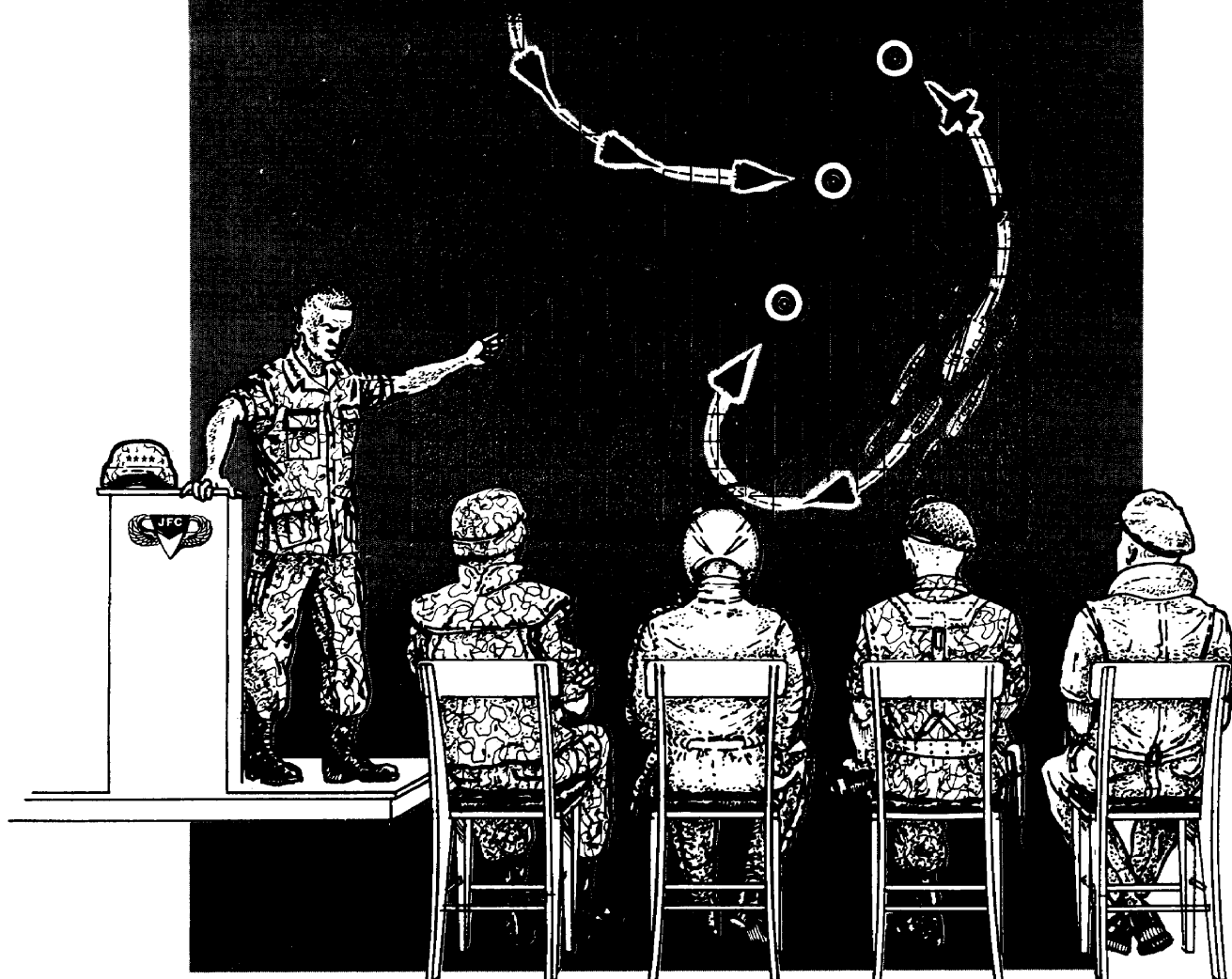
- Monitor and evaluate the feedback of J-SEAD operations.
- Recommend adjustments to current J-SEAD operations based on evaluation of feedback and current component service capabilities.
- Coordinate and issue approved adjustments to the joint force operations as required.

Joint Force Air Component Commander

The JFACC is normally responsible for planning and coordinating J-SEAD for the JFC. If a JFACC has not been designated, then the Air Force Component commander has primary responsibility for J-SEAD beyond the fire support coordination line (FSCL). All J-SEAD activities short of the FSCL must be coordinated with and approved by the ground commander responsible for the affected area of operations.

Component Commanders

The component commanders provide the assets to execute J-SEAD. Ground and naval gunfire forces usually have primary responsibility for engaging J-SEAD targets within the limits of observed fire. Air assets can better attack those J-SEAD targets beyond the limits of observed fire. The limit of observed fire is the range at which a ground-based or airborne observer can visually see the point of impact or burst.



CHAPTER 3.

SUPPRESSION OPERATIONS

Campaign plan J-SEAD supports the theater or operational level of the war (JFC's campaign plan); localized J-SEAD supports the tactical level of war. Complementary suppression procedures, on the other hand, are those procedures used to attack unplanned J-SEAD targets, whether in self-defense or as targets of opportunity.

CAMPAIGN PLAN J-SEAD

Developing campaign plan J-SEAD operations depends heavily on the timely exchange of J-SEAD information and on the component commanders' requirements and capabilities for execution. The development and coordination of the initial campaign J-SEAD plan occurs prior to hostilities. Follow-on campaign plan J-SEAD operations

have the same functional development. The JFC determines the planning and execution of follow-on plans. For coordination channels, see Figure 3-1.

Concept

Campaign plan J-SEAD operations specifically target high-payoff air defense systems whose degradation will have the greatest impact on the

enemy's total system. These targets, such as early warning and acquisition radars, are generally located deep in the enemy area of operations. These radars, coupled with enemy fighters, pose the greatest threat to friendly standoff systems like the airborne warning and control system (AWACS) aircraft. Therefore, campaign plan J-SEAD relies heavily on air suppression assets and surface-to-surface weapons capable of striking these deep targets. The initial campaign plan J-SEAD concept is to protect airborne standoff systems, jammers, C³, and support assets.

Objectives

The objective of the campaign J-SEAD operation is to reduce the capability of enemy surface-to-air defenses, which will allow friendly air operations to be more effective. The culmination of an effective J-SEAD operation is the increased effectiveness of all friendly operations. Since campaign plan J-SEAD objectives have a wide impact on friendly operations, they will usually have a higher priority for assets than localized J-SEAD objectives. Once campaign plan objectives are met, though, assets can be released for localized J-SEAD.

Intelligence Sources

Both national and tactical intelligence sources and agencies should be responsive to the JFC's

intelligence requirements for developing campaign plan J-SEAD. The joint force J2 will provide available information on—

- Characteristics, signal operating instructions, criticality, vulnerabilities, capabilities, locations, and order of battle of enemy air defense communication links and C³ facilities.
- Antiaircraft missiles and artillery sites, and early warning ground-controlled intercept facilities.
- Radio electronic combat assets.
- Weather and terrain within the operational area and their affect on friendly and enemy operations.

Planning Process

The planning process for the campaign plan J-SEAD, which may occur prior to the formation of the joint targeting coordination board, should include—

- Determining or reviewing the campaign objectives.
- Collating and analyzing J-SEAD target information.
- Determining requirements for suppression needs.
- Assigning target priorities.

Legend:

- 1 JFC objective statement
- 2 J-SEAD plan tasking
- 3 Intelligence input
- 4 Multi-service asset availability/capability and J-SEAD campaign target nomination, plans, and operations
- 5 J-SEAD plan development
- 6 Coordination of plan between TACC and service elements
- 7 Campaign plan J-SEAD submitted for approval
- 8 Approved plan incorporated and implemented in Air Force tasking orders, operations orders, etc.

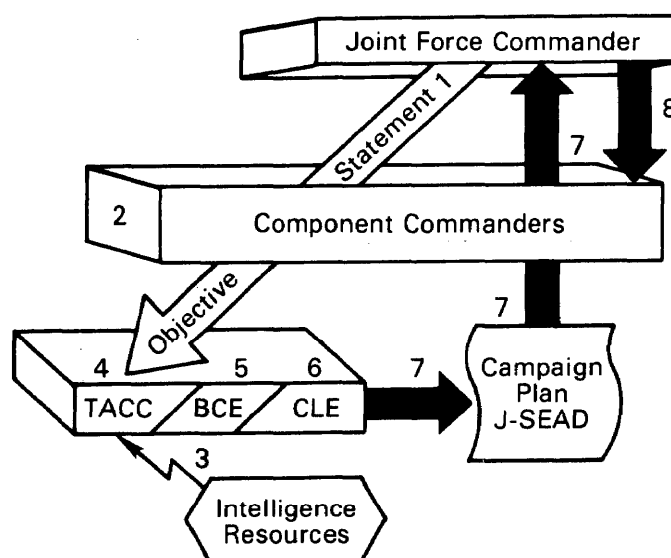


Figure 3-1. Command Relationships for Campaign Plan J-SEAD Development

- Determining the appropriate suppression means required.
- Recommending priorities for competing missions.
- Matching means and targets.
- Assessing results and effectiveness of J-SEAD efforts.
- Assessing the impact of J-SEAD electromagnetic interference on friendly operations.

Within this planning process, the TACC, BCE, and coordinating liaison elements of the other component services are responsible for—

- Developing procedures to update the campaign plan J-SEAD order of battle.
- Developing procedures to monitor mission results against campaign plan J-SEAD targets.
- Developing J-SEAD target priorities.
- Developing C³-protection measures.
- Deconflicting the airspace and timing requirements.
- Recommending target priorities to the JTCB.
- Recommending which component service is responsible for suppression of each target.
- Deconflicting frequencies and spectrum use between J-SEAD and other friendly operations.

The campaign plan J-SEAD resulting from this coordinated effort—

- Reflects JFC objectives.
- Contains a list of target systems selected for suppression.
- Designates component responsibilities for suppressing targets.
- Delineates coordinating instructions.
- Outlines suppression resources to be used.
- Integrates destructive and disruptive planning efforts.

To preclude mutual interference during execution, the plan considers resource utilization, radio frequencies, effects of jamming, airspace control measures such as corridors and altitudes, and the collateral effects of J-SEAD.

Approval and Implementation

The coordinated plan passes through the JFACC to the JFC for approval. The approval process must be timely enough so as not to disrupt the cycle. Once the JFC has approved the plan, the component headquarters implement it through air tasking orders (ATOs) and operations orders.

Respective command, control, communications, and intelligence agency structures monitor the success of J-SEAD. The plan requires continuous updating of intelligence information by the TACC during J-SEAD operations. Also, the JFC and the component headquarters must assess campaign plan J-SEAD effectiveness and exchange mission results on all SEAD targets.

LOCALIZED J-SEAD

On the tactical level, localized J-SEAD applies to specific geographical areas, times, and tactical targets. The objective of localized J-SEAD is to preserve air resources by protecting friendly aircraft conducting air operations. Localized J-SEAD operations—

- Occur throughout the theater.
- Allow friendly aircraft to operate at low and medium altitudes.
- Protect friendly aircraft transiting the FLOT.
- Enhance ground maneuver operations by protecting friendly air assets.

Planning Responsibilities

The echelon requesting an air mission starts the localized J-SEAD request and planning. This planning must be integral to specific air mission planning and use existing C³.

The JFACC recommends to the JFC which airborne suppression sorties should support the battle. The JFACC must also develop a localized air defense threat priority list to facilitate economy of effort for J-SEAD.

The TACC coordinates with the JFACC, BCE, and the other coordinating liaison elements to develop the localized threat priority list. The suspected enemy air defense order of battle and its system capabilities, as well as the flight profiles and defensive capabilities of projected friendly aircraft, govern the priorities on this list.

Intelligence agencies use this localized threat priority list for planning, collection, and management of operations. They evaluate aircrew reports that comment on the effectiveness of enemy air defense systems and, if necessary, realign the threat priority list.

Surface Suppression Assets

With the JFC's guidance, the components' fire support coordination centers and fire support elements will determine the surface suppression systems available to conduct localized J-SEAD. Examples of these assets include field artillery, tanks, mortars, naval gun fire, and electronic warfare. The component coordinating liaison elements at the TACC assist localized J-SEAD operations by providing the ability to request surface fire support for the conduct of joint air operations. The component commanders continuously provide to the TACC updated lists of prioritized J-SEAD targets requiring JFACC support.

The J-SEAD target list includes data such as target location, desired effects, timing, and sequence of attack. The BCE and other coordinating liaison elements are responsible to each component's command level to consolidate J-SEAD target priorities for respective components. This procedure is an efficient and effective means for developing the J-SEAD target list.

Tactical air control parties, air and naval gunfire liaison companies, and fire support teams identify potential localized J-SEAD targets and request J-SEAD air support. Control parties and liaison companies also coordinate ground and naval J-SEAD support necessary for J-SEAD through the fire support coordination center and supporting arm coordination center.

Support Requests

The J-SEAD process starts when one component requests J-SEAD support from another. The component uses the existing C³ structure to request or coordinate interservice J-SEAD support.

Preplanned Missions

The unit initiating the preplanned request for air support should also identify known or suspected

enemy air defense locations around the objective. During the processing of a preplanned request for air support, the unit assesses suppression capabilities and establishes J-SEAD commitments. Each echelon within a component refines and updates pertinent threat data. The tactical air request contains this updated data, along with the type of suppression committed by the requesting component. The planning process should include both destructive and disruptive means.

Immediate Missions

Threat assessment and suppression requirements, usually destructive in nature, must be made quickly when processing a joint tactical air request. Any organic echelon on the air request net able to meet suppression requirements may enter the air request net through the tactical air control party or air and naval gunfire liaison company to respond to the specific J-SEAD request.

If a surface force cannot support the J-SEAD requirement, the component control center, Air Force air support operations center, Marine Corps direct air support center, or the Navy supporting arms coordination center passes the request to the TACC for immediate JFACC J-SEAD support. The airborne battlefield command and control center may also perform this function as an alternate to the Air Force air support operations center.

Execution timing derives from mission data, including time on target, relayed from the component control center to the requesting unit. If a unit cannot fulfill a prearranged localized J-SEAD commitment, it must relay this information immediately to the component control center through the appropriate command element. Procedures for requesting localized J-SEAD are the same as those for close air support. If localized J-SEAD support changes, appropriate elements should notify the requesting unit immediately.

Joint Fire Requests for Corridor Suppression

All service components with air assets may request J-SEAD operational support from surface forces. The following examples of air missions require J-SEAD support from surface forces:

- Tactical air missions while transiting the FLOT.

- Air missions supporting tactical airlift or combat search and rescue operations.
- Air support missions initiated by the JFACC.
- Support of special operations.
- Helicopter operations forward of the FLOT.

The TACC notifies the BCE and other coordinating liaison elements of the mission route and time when requesting J-SEAD suppression from surface forces. The TACC submits to the BCE a request for J-SEAD support in the primary area of the surface forces' J-SEAD responsibility. The TACC initiates the request and passes the following information through the component control center to the appropriate commander for fire support:

- Prioritized target lists.
- Target locations by last known positions and time.
- Type of mission to be supported.
- Effects required.
- Specific corridor boundaries.
- Time and routing.
- Friendly aircraft information such as mission, type, and times.
- Restrictions.
- Frequency requirements.

When the TACC receives approval for a request for corridor suppression, it notifies the supporting and controlling air elements. Air control elements monitoring the air mission will immediately pass any deviations to the surface force. The fire support coordination center or element monitoring the suppression will also immediately pass any deviations to the air element as well.

Coordination

To avoid duplicating efforts, the JFACC ensures the development of an air defense threat priority list for localized J-SEAD operations. The TACC develops and updates this list and coordinates it with the BCE. The list includes prioritized enemy air defense weapon systems and J-SEAD targets to support air missions previously requested by the Army commander.

The process for fulfilling J-SEAD requirements originates with the ground echelon or component requiring or initiating operations that need J-SEAD support. The initiating echelon or service component must always make use of organic destructive and disruptive means. Processing of localized J-SEAD requests proceeds from the lowest echelon of command to the theater army according to the tactical air control system and Army air-ground system.

A requesting service component must first consider what organic J-SEAD systems are available. When the requirements exceed the capability or availability of its systems, the requesting service component passes the requirements from the fire support element at corps level and below through the Army group and theater army field artillery section, to the BCE for resolution. Acting on behalf of the JFACC, the BCE and TACC usually resolve the need.

Units requesting air support will identify known or suspected threat air defense systems that could threaten the mission. J-SEAD requests will also include these defense systems and identify targets that cannot be engaged with organic assets.

The fire support element at each echelon processes these requests and then assesses and commits suppression resources as appropriate. The operations staff officer (G3) and fire support element at each echelon will coordinate with the intelligence officer (G2) to refine and update threat data pertinent to the mission. During processing, the air support request will indicate the type of destructive or disruptive suppression assets available for the mission. The processing of these requests continues until it reaches the fire support coordinator at theater army headquarters. The request then goes to the BCE collocated with the appropriate TACC.

When supporting units cannot fulfill a J-SEAD commitment to support a mission, they must immediately relay this information to the corps air support operations center and fire support element. The fire support element then either resolves the shortfall or relays it to the next higher Army headquarters. The air support operations center will also use its organic communications capability to notify the TACC of the shortfall. This latter notification ensures timely response to the J-SEAD requirement.

COMPLEMENTARY SUPPRESSION

Campaign plan and localized J-SEAD are those operations planned and conducted against known or suspected threats affecting friendly air operations. Many air defense threats are not identified in enough time for planned suppression. Complementary suppression is the unplanned suppression of these threats. "Complementary suppression includes aircrew self-defense and attack against targets of opportunity."³ The JFC will establish the rules of engagement for complementary suppression.

Aircrew Self-Defense

Aircrews have the inherent right to self-defense. They use self-protection systems and tactics when under imminent or actual attack by lethal enemy air defenses. Restrictions on self-defense may decrease aircrew survivability. Unless otherwise dictated by the laws of war, restrictions ordinarily should be imposed only for the safety of friendly forces.

Targets of Opportunity

J-SEAD *targets of opportunity* are those enemy air defense systems visible to surface or airborne sensors or observers, within range of available weapons, and not yet targeted.

Surface and air weapons systems may suppress air defense targets of opportunity whenever capabilities, mission priorities, and rules of engagement permit. Such suppression operations must be in accord with established rules and fire support coordination measures. The purpose of J-SEAD rules of engagement is to enhance effective suppression of enemy air defenses while minimizing risks to friendly forces.

Targets Acquired by Observers or Controllers

Many J-SEAD efforts by surface forces may be against targets of opportunity. Many combat elements may often be in good position to acquire J-SEAD targets of opportunity. Air Force air liaison officers, airborne forward air controllers, enlisted terminal attack controllers, and their counterparts from other services will have the

authority to request suppression for J-SEAD targets of opportunity. They will forward these requests through their respective fire support channels; those from air assets will go through the existing C³ system. The following procedures apply:

- Priority will go to suppression systems that belong to or support the ground force unit acquiring the target because it can respond immediately.
- If the suppression requirement exceeds the capabilities of the ground forces, the immediate request will be sent via the air request net to the component control centers.
- If air suppression assets are not available, the component control center passes the request to the TACC.

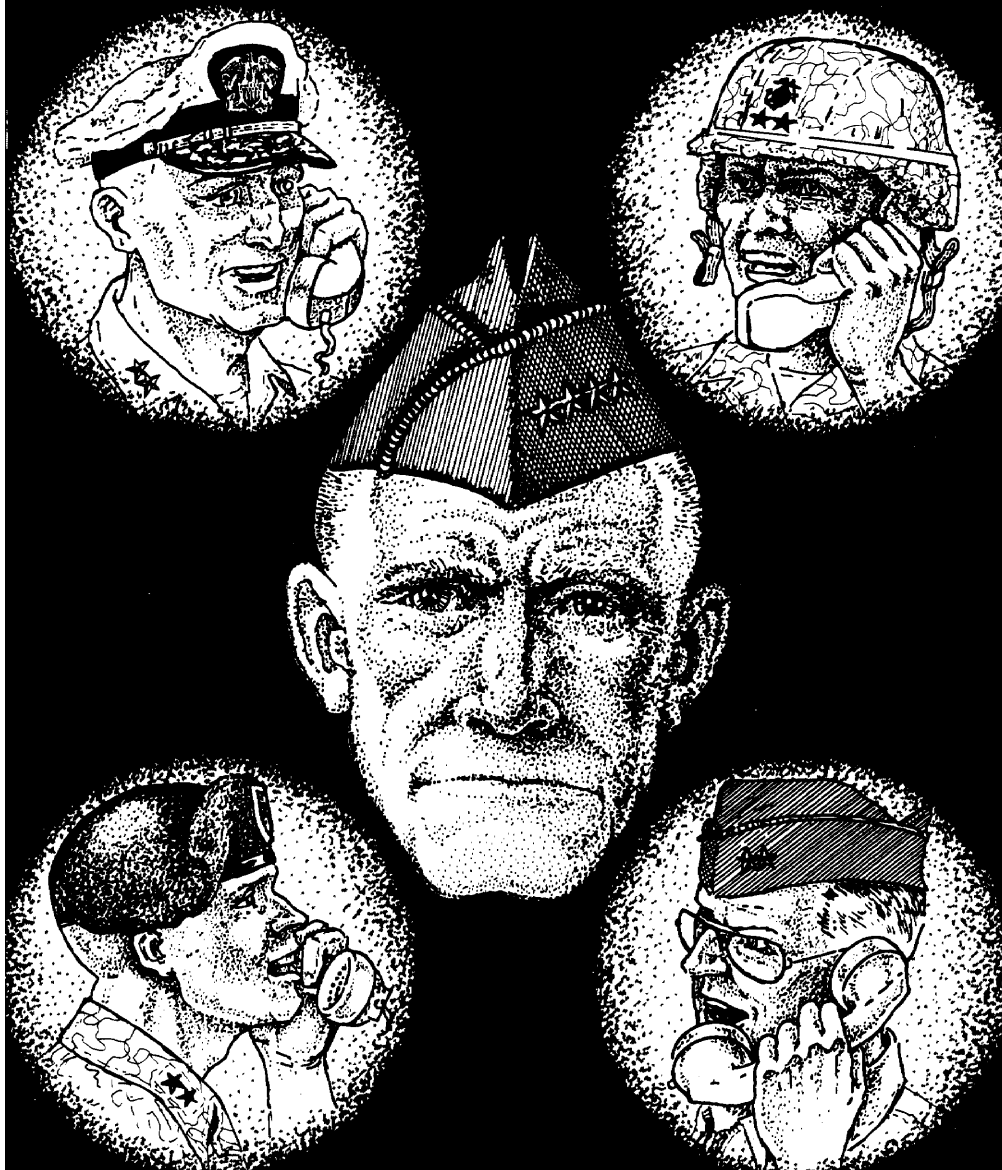
Targets Acquired by Aircrews

When aircrews have acquired J-SEAD targets of opportunity but have not engaged them due to mission priorities, system capabilities, or J-SEAD rules of engagement, they pass the information to the agency controlling their mission. This agency immediately passes the targeting data through the appropriate system or systems to coordinate with the surface forces for targeting.

Coordination

Complementary SEAD is a continuous operation involving immediate response to acquired air defense targets of opportunity. To support campaign plan or localized J-SEAD operations, the Army component commander can assign, for a specific period of time, a higher priority of effort to those areas along the FLOT where the plans call for air operations. In cases where JFACC air assets are not available or not required, the Army component commander establishes priorities for ground complementary SEAD. He has these priorities forwarded from the fire support coordinator at theater army headquarters to the executing commands at corps level and below.

³Joint Doctrine for Theater Counterair Operations, JCS Publication 3-01.2, 1 April 1986.



CHAPTER 4.

J-SEAD COORDINATION

The JFC has overall responsibility for all operations of the force, including J-SEAD. His staff is responsible for planning and coordinating the J-SEAD effort. Once this has been done, the component commanders then plan for the service execution of J-SEAD in support of the JFC's concept. See the appendix for quick-reference tables that list the functions and responsibilities of key duty positions for each service.

ARMY

The following discussion outlines the Army's command and control (C²) structure and responsibilities to support the JFC's J-SEAD plan. The BCE is discussed in detail. However, a functional equivalent may fill its role and responsibilities. See Figure 4-1.

The Army component commander then develops supporting plans to meet the requirements of the theater campaign plan and campaign plan J-SEAD. In so doing, he must ensure the effective and efficient employment of the components' assets. This mandates close coordination and integration of his components' efforts to ensure proper synchronization and unity of effort.

Army support to J-SEAD requires judicious and efficient employment of limited resources such as electronic warfare systems, missiles, and unmanned aerial vehicles within the theater of operations. All Army echelons at battalion and higher levels request J-SEAD to support the campaign plan; they forward these requests to the Army group headquarters for integration into the composite Army group J-SEAD requirement.

The Army group's fire support coordinator and the air support coordination element then prioritize and forward the requirements to the theater army for consideration. The theater army nominates in priority order the approved J-SEAD requirements.

The Army component commander, through the Army group headquarters, provides resources such as forces, ammunition, and intelligence and electronic warfare assets. He may also change the disposition of forces and weapon systems, as well as creating deception plans to obscure movements. These changes may, in turn, require shifting assets between corps. All available theater assets may be used to support J-SEAD.

Echelons above Corps (EAC).

The Army coordinates best with other components at EAC levels, specifically y the theater army or Army group.

Theater army

The next echelon above the corps will be a joint task force, a theater army, or an army group. In an established theater of operation, the Army

component under a unified command is the theater army. The theater army commander is under the operational command of the theater commander (unified commander or JFC) but is appointed by the chief of staff of the US Army.

The forces of the theater army are tailored to meet operational, administrative, and logistical needs based on the area of operation and the threat.

The theater army headquarters has operational responsibility for Army J-SEAD coordination. The fire support coordinator is the designated individual responsible for coordinating J-SEAD for the Army component forces. The JFACC provides a coordination element to assist in planning and coordinating air support for J-SEAD. This element also assists the theater army commander in making the apportionment recommendation concerning air support.

Army group

Depending on the size of the army force, the next echelon below theater army may be the Army group. The Army group is also tailored to meet operational, administrative, and logistical needs based on area of operation and the threat.

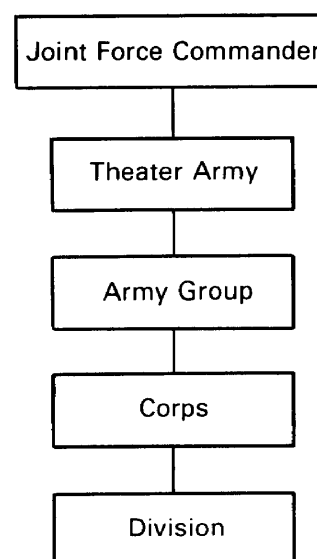


Figure 4-1. Army Command Relationships

The theater of operation commander, in coordination with the unified commander, may designate the formation of an Army group. The force of the Army group consists of multiple corps. The Army group has the same J-SEAD function and responsibility as the theater army.

Battlefield coordination element

To optimize support, to prevent friendly mutual interference or fratricide, and to achieve success throughout the battlefield, the Army commander and the JFACC must coordinate closely. The BCE is the Army organization that provides this interface for tactical air (TACAIR) and J-SEAD operations. The BCE represents the Army and coordinates air missions and other support requirements at the JFACC's TACC.

In a multicorps environment, each corps provides liaison officers who conduct primary staffing actions with the EAC headquarter's fire support coordinator and not directly with corps fire support elements. The BCE monitors and analyzes the land battle. It provides an interface for exchange of current intelligence and operational data between the Army commander and JFACC, and it coordinates requests for air support.

The fire support elements at corps levels and below and the fire support coordinator are the focal points for planning and executing J-SEAD. The BCE is the focal point for requesting J-SEAD. Working inside the TACC or its functional equivalent, the BCE conducts face-to-face coordination with JFACC air mission planners. As mission packages are developed, BCE members provide the JFACC with data on Army J-SEAD support available. They concurrently feed JFACC plans back to their commander and through the corps liaison officer to the corps tactical operations centers for initiation and approval of fire planning and mission priorities. The BCE coordinates for the Army commander campaign targets, localized area designation, corridor open and close times, and complementary J-SEAD priorities. The BCE also coordinates with the JFACC to attain joint asset support for Army and Marine Corps aviation operations.

The BCE provides a two-way flow of information between the JFACC and Army commander on the status of J-SEAD activity. It informs the Army

units of air operations by updating J-SEAD participants in schedules and subsequent changes. The BCE also advises the JFACC on the status of surface J-SEAD activity. The BCE remains especially watchful for changes in surface missions that might affect JFACC mission packages. For example, if Army mission changes cause cancellation of planned Army SEAD fires in support of a corridor opening, the BCE needs to advise the TACC of this fact immediately. This is also true if the JFACC cancels or changes a mission package which includes scheduled J-SEAD fires. The TACC would need to immediately inform the EACs or corps through the BCE.

Corps and Division Elements

Army corps and division elements both play important roles in J-SEAD. Corps elements—

- Request, coordinate, and integrate J-SEAD efforts to support air missions within their areas of operations.
- Provide J-SEAD support with corps resources. Task subordinate units for SEAD support.
- Advise the BCE and air support operations center of J-SEAD mission results.
- Establish fire priorities.
- Select intelligence on enemy air defense systems.
- Disseminate this information to EAC, adjacent corps, and subordinate units.
- Divisions have responsibilities similar to those of the corps, except at a lower level. See the appendix for specific responsibilities and functions of corps and division elements.

MARINE CORPS

The Marine Corps possesses the full range of suppression capabilities with the exception of special operation forces (SOF). The success of J-SEAD requires thorough planning and positive control of its execution whenever possible. See Figure 4-2 for command relationships.

Refer to the following text for internal responsibilities and functions used in J-SEAD coordination; refer also to Table A-2.

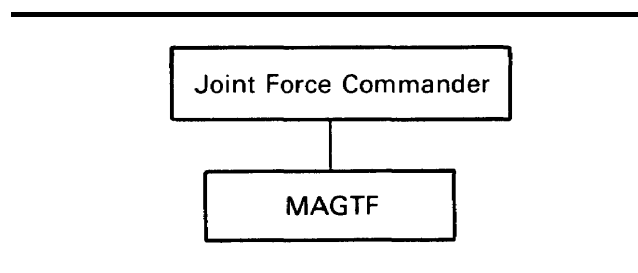


Figure 4-2. Marine Command Relationships

Marine Air-Ground Task Forces

For combat operations, the Marine Corps task-organizes its forces into Marine air-ground task forces (MAGTFs). It trains and equips these combined-arms forces (air, ground, and combat service support) for expeditionary operations to include amphibious operations. These forces are also capable of sustained operations ashore. Each MAGTF has a command element (CE), ground combat element (GCE), aviation combat element (ACE), and combat service support element (CSSE).

These MAGTFs vary in size. They are, from smallest to largest, a Marine expeditionary unit (MEU), Marine expeditionary brigade (MEB), and Marine expeditionary force (MEF). Both the MEB and MEF have personnel and equipment necessary to provide C² of aircraft and missiles. Because the MEU does not normally have this C² capability, it must rely on the Navy for C² functions.

The MAGTF commander delegates responsibility for SEAD operations to the commander of the ACE, the tactical air commander (TAC), and the GCE ground commander (GC). Final approval for a confirmed J-SEAD requirement rests with the MAGTF commander.

The ACE is task-organized as required to provide Marine aviation functions—aerial reconnaissance, anti-air warfare, assault support operations, offensive air support operations, EW, and control of aircraft and missiles.

The TAC, with the approval of the MAGTF commander, plans, integrates, and directs the employment of air assets assigned to J-SEAD missions. He coordinates J-SEAD activities with the G2, G3, and planning sections of the ACE and

the ground commander, as well as other air-capable components within the joint force. He then publishes J-SEAD tasking in the ATO.

The ground commander plans, integrates, and directs the employment of ground forces assets for J-SEAD operations. After coordinating with the TAC, he publishes J-SEAD requirements in fire plans and other tasking directives.

The G2 sections of the ACE and GCE receive, integrate, and validate requirements for J-SEAD. They develop and direct the collection and coordination of intelligence information regarding J-SEAD activities. They also correlate and develop intelligence situation assessments of J-SEAD operation areas.

The ACE operations officer and ground commander's fire support cell plan SEAD operations and ensure that guidance and all air-ground fire support requirements are integrated into overall MAGTF operations. They also coordinate the operational and intelligence support required for J-SEAD operations. Air, artillery, and naval gunfire LOs participate in J-SEAD planning, which is usually completed at the fire support coordination center (FSCC).

Marine Air Command and Control System

The Marine Air Command and Control System (MACCS) provides the MAGTF commander with the means to command and control air operations with an assigned sector and to coordinate MAGTF air operations. The MACCS is comprised of air command/control agencies and surface-to-air missile resources which are tasked from a Marine air control group to fulfill distinct mission requirements. The MACCS is also capable of exchanging early-warning and surveillance information via tactical digital information links (TADIL) command and control agencies. These include—

- TADIL A, B, and C.
- Air tactical data link (ATDL)-1.

For a detailed discussion of the MACCS, refer to FMFM 5-1.⁴ The MACCS elements involved in J-SEAD operations are the tactical air command center (TACC), the tactical air operations center (TAOC), the direct air support center (DASC), and the tactical air control party (TACP).

⁴ *Marine Aviation*, August 1979.

Tactical Air Command Center

The TACC is the principle operations cell from which aircraft and the air warning function of tactical air operations are directed. It is the senior agency of the Marine Air C² System, and it coordinates air operations with other services. Using MAGTF air assets, the TACC plans section executes the J-SEAD operations of the ATO. The FSCC coordinates the execution of J-SEAD operations by surface means. The TACC, in turn, will coordinate MAGTF SEAD operations with the FSCC and other components as necessary. The operations section of the TACC provides the facilities for the TAC (normally the MAGTF ACE commander) and his staff with all MAGTF air operations. The TACC operations section maintains the ATO, recommends allocation of air assets based on TAC guidance, supervises subordinate MACCS agencies, and coordinates with external air control agencies.

Tactical Air Operations Center

As a subordinate air control agency for the TACC, the TAOC provides MAGTF early warning and surveillance, controls the intercept of hostile aircraft, and provides navigational assistance to friendly aircraft. This includes control and transfer of control of aircraft to the DASC for J-SEAD operations. The TACC is also the principal agency with the MACCS for the acquisition and processing of air track information.

Normally the TAOC transfers control of J-SEAD aircraft to the DASC, where an assignment of aircraft is made to a TACP for terminal control of the J-SEAD mission.

Direct Air Support Center

The DASC coordinates control of J-SEAD aircraft in support of MAGTF operations. The tactical air operations center passes control of J-SEAD aircraft to the DASC, who in turn will pass them off to a terminal controller for execution of the mission. TACPs provide terminal control of aircraft executing SEAD operations within the Marine Corps area of operations.

Tactical Air Control Party

Organic to the ground combat element, the TACP is an integral part of the MACCS agency, which provides aviation advisory personnel and

terminal control for close air support (CAS) aircraft for ground maneuver units. The TACP's mission is to establish and maintain facilities for liaison and communications between supported ground units and appropriate air control agencies, to advise the ground unit commander on the employment of supporting aircraft, and to request and control CAS missions.

Operating from a helicopter or fixed-wing aircraft in the area of operations, the forward air controller (airborne) (FAC[A]) detects, marks, and controls air support missions in response to GCE requirements.

If the JFC appoints the MAGTF commander as the JFACC, the MAGTF commander will direct the ACE to coordinate with the GCE to plan J-SEAD operations. When MAGTF capabilities are insufficient or when other joint force assets could more effectively accomplish J-SEAD operations, the ACE and GCE will request external J-SEAD support.

NAVY

Navy fleet commanders in chief and numbered fleet commanders have geographically oriented responsibilities. They are permanently organized and assigned to a unified theater command. Below the numbered fleet level, the elements and units are task-oriented. Specific unit assignments in the operational command are not permanent and depend on pertinent tasking and deployment schedules.

Numbered fleet commanders exercise operational control of assigned forces within their geographic areas of control. Their control also extends to non-USN units placed under their direct commands. Figure 4-3 shows the relationship of the numbered fleet commander to the operational command structure.

Battle Force and Group Commander

The battle force and group is normally built around an aircraft carrier (conventional or nuclear) and supporting units (cruisers, destroyers, and frigates). Its mission is to conduct broad naval warfare missions, such as maritime superiority and strike warfare. Its commander organizes it under the composite warfare commander (CWC) concept.

The CWC has overall command and control responsibility for the battle force and group. Several subordinate warfare commanders assist him in organizing and fighting the battle. Among these subordinate commanders are the antiair warfare commander (AAWC) and antisurface warfare commander (ASWC) who are responsible for collecting, evaluating, and disseminating tactical information. The CWC may delegate them authority to respond to threats with assigned forces.

Of the other supporting warfare commanders, the air resource element coordinator (AREC) and the electronic warfare coordinator (EWC) would be directly involved in J-SEAD operations.

Depending on the size and disposition of his force, the CWC may assume the roles of one or more of the subordinate warfare commanders.



*Level of command contingent upon size of battle force or group involved

Figure 4-3. Navy Command Relationships

Strike Warfare Commander

According to current doctrine, the strike warfare commander (SWC) is the battle force or group commander. It is his responsibility to coordinate strikes against land targets: strike warfare, battle-field air interdiction (BAI), CAS, and SEAD. This

authority cannot be delegated; therefore, the SWC commands or coordinates J-SEAD operations. He identifies the broad objectives of the J-SEAD plan and determines the scope of involvement by individual unit and element commanders. These commanders will do the actual planning and execution subject to his approval.

The SWC is also responsible for determining the level of assistance required by nonorganic units and for coordinating their use.

When naval forces supplement or supply J-SEAD operations, the appropriate ground and air headquarters should provide the SWC with liaison personnel. These liaison personnel usually coordinate directly with the SWC air operations staff and strike planners.

Air Resource Element Coordinator

The AREC is tasked with managing battle group air assets to protect the force and project power ashore. The AREC is generally the commanding officer of the carrier embarking the CWC. As air resource element coordinator, he must be aware of the aircraft needs within the battle group. The AREC must keep the CWC, warfare commanders, and supporting coordinators fully apprised of carrier air operations and aircraft availability and assignment. A daily air plan provides information on daily air operations to the battle group. The AREC coordinates the use of battle group aircraft to support air operations ashore or the tasking of needed nongroup assets to support battle force power projection.

Electronic Warfare Coordinator

The EWC's role on the CWC staff includes being the principal advisor on using electromagnetic devices to support EW and command, control, and communications countermeasures (C³CM). In this role, the EWC coordinates with members of the CWC electronic warfare cell. His tasking is to coordinate and optimize EW assets, to assist the CWC and subordinate warfare commanders in assessing the air threat environment, and to develop an overall C³CM policy. He also plans and coordinates the use of battle group assets, such as the EP-3 and EA-6B platforms, and nonorganic assets.

Navy Command and Control Links

Navy command and control links within the theater for the Naval Tactical Distribution System (NTDS) are—

- TADIL A (link 11) for NTDS equipped ships.
- TADIL A to Air Force CRC via MPC.
- TADIL A to Marine MACCS.
- Link 14 for NTDS ships to non-NTDS equipped ships.
- Link 4a for NTDS ships to aircraft.
- Army via TADIL B through MACCS or AF MPC.

AIR FORCE

In theater operations, the TACS provides C³ support for the Air Force component commander (AFCC). Not only does this system link all levels of the air component's forces, but it also links the air component with all other components. It enables coordination and control of day-to-day planning and tactical employment of the AFCC's forces. Using its planning facilities and established C³ system procedures centralizes control while allowing decentralized execution. TACS extends the direction of air power from the AFCC to the point of attack.

Tactical Air Control Center

As the senior air operations element of the TACS, the TACC has operations, intelligence, and support personnel who plan, coordinate, and direct tactical air operations, including J-SEAD. Figure 4-4 shows the basic TACC organization and interface with the BCE and coordinating liaison elements in each division of the TACC.

The TACC formulates and coordinates J-SEAD activities that complement the planning of tactical air mission requirements. It receives, assembles, analyzes, processes, and disseminates all source intelligence to fulfill the requirements of the J-SEAD effort. It can also display the tactical air and surface situation, using data obtained from the enemy situation correlation division and other services' intelligence organizations. Specifically, the TACC—

- Consolidates preplanned requests for air operations, to include planned JFACC and surface force J-SEAD support for airborne missions.
- Provides the JFACC with J-SEAD requirements to assist in the apportionment process.
- Tasks the J-SEAD assets of the AFCC to support the overall campaign plan J-SEAD based on the JFACC's allocation.

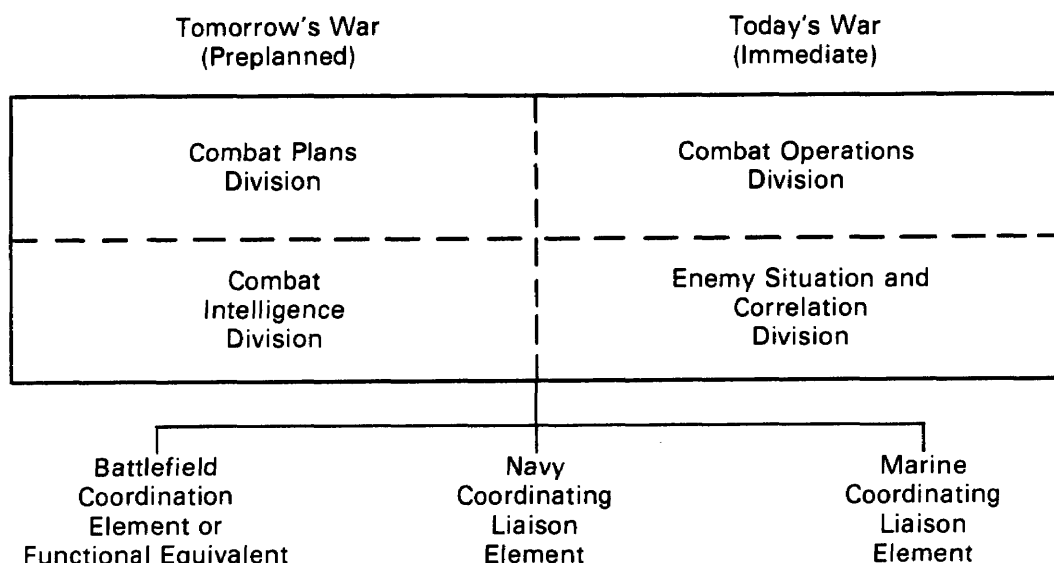


Figure 4-4. TACC Divisions with BCE and Coordinating Liaison Element Interface

Several elements of the TACC contribute directly to J-SEAD operations. Their responsibilities and functions are described in Table A-3.

Military Airlift

Some forces that conduct air operations in a joint force area of operations (AO), such as theater airlift forces, are not capable of providing SEAD for their own operations. However, these forces conduct air operations which may demand extensive J-SEAD support. Aerial delivery of reinforcements, sustainment to troops in contact, and airlift support for deep operations may require J-SEAD support for an extended duration. Variations between J-SEAD support aircraft and airlift aircraft, such as sortie duration, maneuverability, airspeed, and protective countermeasures, pose challenges for J-SEAD planners. Consequently, coordinating J-SEAD support for these operations requires the involvement of additional agencies in the J-SEAD planning process. These additional air operations planning and coordinating elements include the theater airlift control center (ALCC), the joint

rescue coordination center (JRCC), and the AF special operations component (AFSOC).

Theater Airlift Management

The airlift system is discussed in detail in FM 100-27/AFM 2-50.⁵ Figure 4-5 shows the theater airlift management structure within a unified command and its relationship to key elements of the tactical air control system/Army air-ground system.

All service components may request airlift through service component channels by using JFC-prescribed joint airlift request procedures. Figures 4-6 and 4-7 show examples of airlift requests processed through Army channels.

NOTE: The air support operations center (ASOC) and TACC do not process airlift requests except in some tactical emergencies when access to normal communications channels is denied. A JFC-designated agent or joint transportation board validates and prioritizes all requests and gives them to the commander of airlift forces (COMALF) for the theater ALCC's mission planning, coordination, and scheduling.

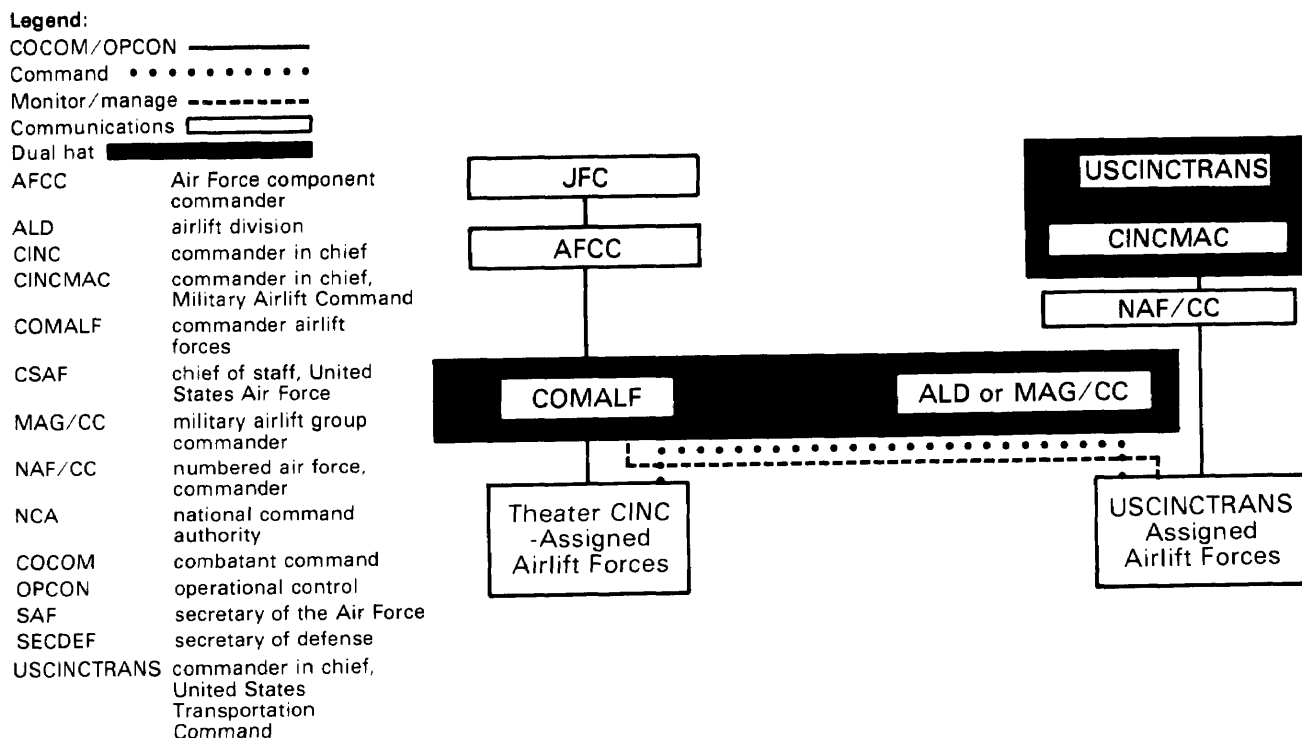


Figure 4-5. Air Force Airlift Command Relationships

⁵ US Army/US Air Force Doctrine for Joint Airborne and Tactical Airlift Operations, 31 August 1985.

Usually collocated with the TACC, the ALCC may be geographically separated if the complexity of the theater or other circumstances warrant. If geographically separate, the ALCC must have a secure, dedicated communications link with the TACC.

Airlift Operations

The service component requesting airlift usually identifies J-SEAD requirements at the lowest echelon. J-SEAD supporting an airlift mission receives a priority commensurate with the urgency of the mission. The J-SEAD request passes

through the component channels used to request airlift to ensure planners are in the coordination cycle. Tactical airlift liaison officers (TALOs) and MAC liaison officers (MACLOs) usually assist service component planners in confirming the need for J-SEAD support.

Planners may not recognize the need to support some airlift missions with J-SEAD until after they have processed a request and given it to the ALCC. In this case, the ALCC initiates the request for J-SEAD support with the TACC.

Some theater-level operations, such as airborne assault and deep operations, may require J-SEAD

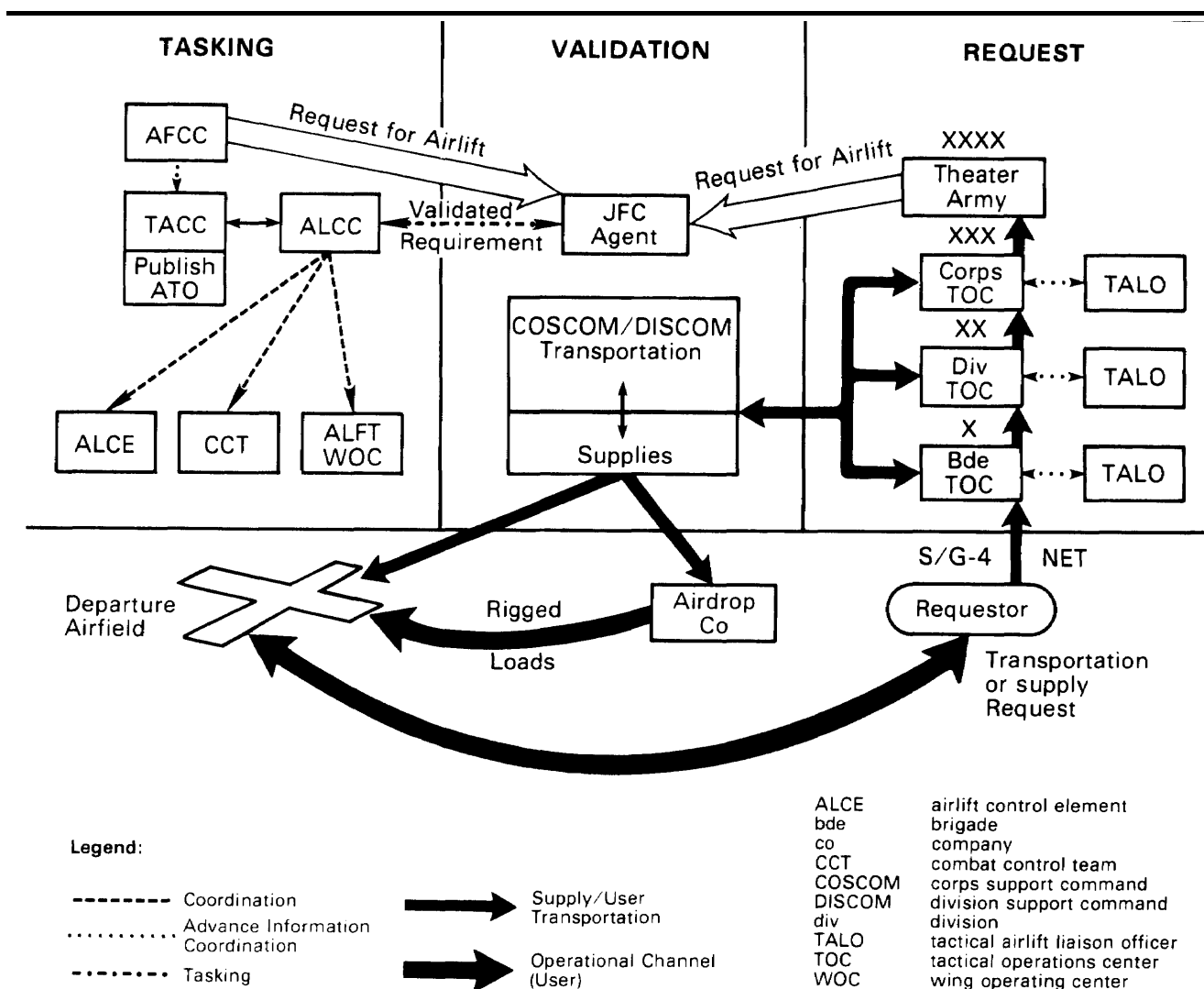


Figure 4-6. Request Channels for Preplanned Airlift Support

support. All components and agencies involved in the operation must coordinate their efforts. Therefore, the various planners from each agency may have to form an ad hoc joint planning group.

Preplanned airlift operations. The ALCC airlift operations division—

- Works through the airlift duty officer (ALDO) to prepare the airlift ATO.
- Coordinates specific airlift missions with the TACC airspace management section.
- Deconflicts airlift operations with other planned air operations.

- Coordinates to limit the potential for fratricide from friendly fires.
- Coordinates J-SEAD support.

When major airlift operations need dedicated support such as J-SEAD and CAS from other air operations elements, airlift operations planners may have to work directly with the—

- Appropriate TACC combat plans mission schedulers.
- BCE.
- Coordinating liaison elements.

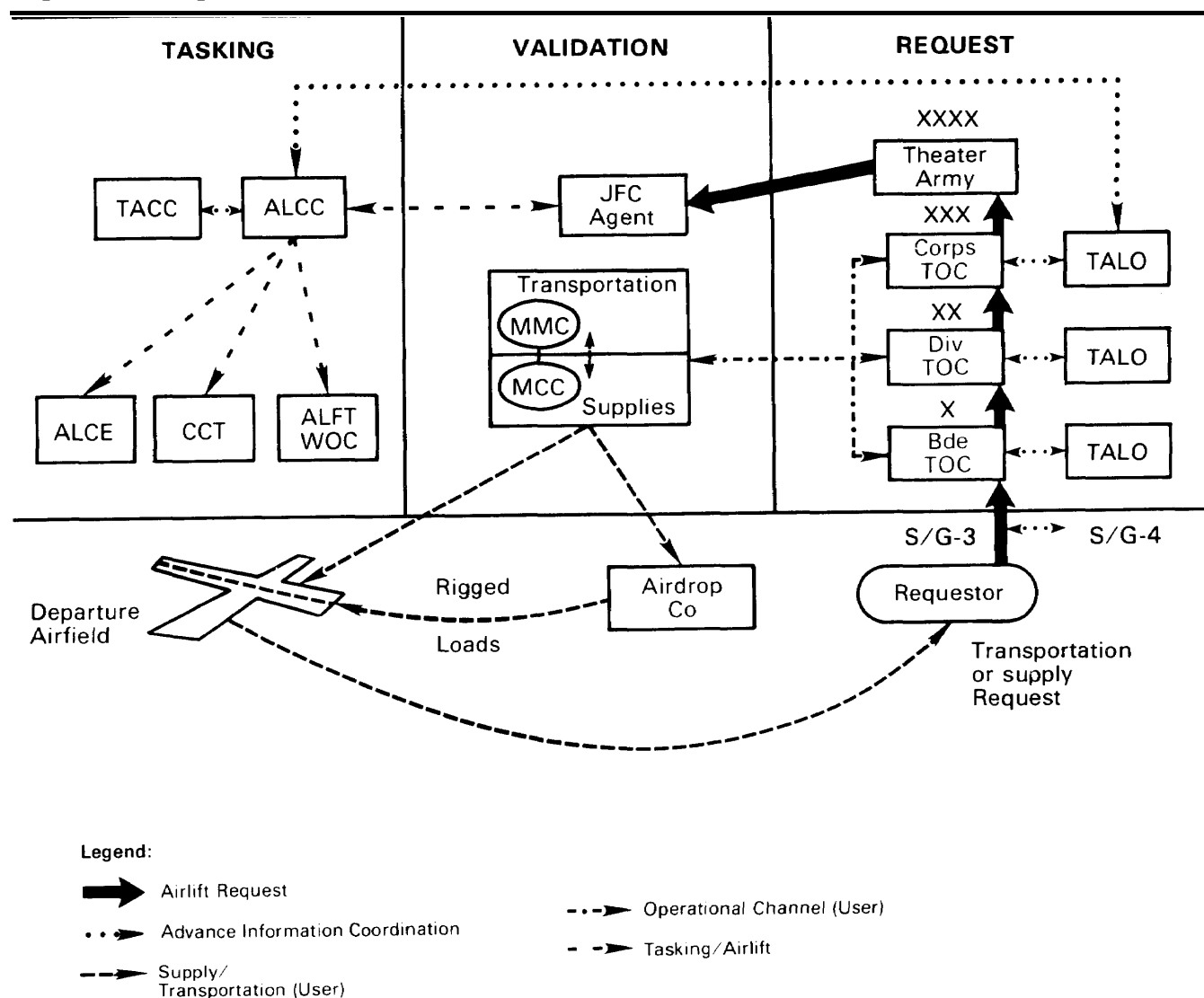


Figure 4-7. Request Channels for Immediate Airlift Support

Such interface is necessary to properly sequence all of the air activity and supporting surface fires.

Forces and agencies executing the operations must review both the TACC ATO and the airlift annex to understand the sequenced *packaging* of the J-SEAD support. The ATO must contain the specifics of the mission.

Immediate airlift operations. TALOs provide advance notification and coordination of immediate airlift requests, tactical emergencies, and known J-SEAD requirements to the ALCC. Refer to Figure 4-5. In doing so, TALOs use a radio net separate from the air request net.

Advance notification permits the ALCC to begin the planning and coordinating process, but the service component requesting airlift support still must obtain validation and prioritization of the request. In tactical emergencies, the BCE may work the validation process in reverse.

The ALCC senior duty controller identifies airlift resources to be used and formulates a mission concept. A third division within the ALCC, combat operations, actually plans and coordinates immediate airlift operations and develops J-SEAD support packages with the BCE and coordinating liaison elements.

The senior duty controller then gets back the completed airlift mission schedule. TACC combat operations and service component fire support elements simultaneously direct J-SEAD support missions.

Nonairlift J-SEAD procedures. Military Airlift Command forces may operate under a C² facility other than the ALCC, such as a joint rescue coordination center (JRCC) or Air Force special operations control center (AFSOCC). In these situations, the applicable C² facility coordinates J-SEAD requirements with the TACC through the appropriate liaison officer.

APPENDIX

SERVICE-UNIQUE RESPONSIBILITIES AND FUNCTIONS

Table A-1. Army Corps and Division Elements

Element: G3

Function: operations

Responsibilities:

- Ensure that J-SEAD is a planning consideration whenever tactical air support or helicopters are committed in the corps or division area.
- Coordinate J-SEAD with other staff sections and the TACP/air and naval liaison company to ensure all aspects of the J-SEAD are considered.
- Coordinate with the Air Force ASOC (located with the fire support coordinator [FSC] at the corps tactical operations center) to ensure understanding of the corps and Air Force operational objectives and J-SEAD requirements.
- Determine EAC support requirements for J-SEAD operations.
- Integrate corps J-SEAD requirements against enemy first and second echelon forces.
- Recommend priorities for allocating critical resources for the J-SEAD effort.
- Plan, integrate, and direct offensive EW activities through the FSC, EW section, and military intelligence (MI) brigade/battalion (CEWI), to disrupt enemy air defenses.
- Establish C³-protection priorities and finalize C³-protection requests from the assigned division for transmission to echelons above corps.
- Monitor the J-SEAD effort through the FSC.
- Inform the G2 of intelligence support required for J-SEAD.
- Approve guarded frequency list.

Element: battlefield coordination element at the TACC

Function: operations

Responsibilities:

- Identify and coordinate Army SEAD plans for all tactical air requests within range of Army SEAD assets.
- Identify known enemy air defense locations beyond the range of Army SEAD assets.
- Monitor and ensure execution of J-SEAD operations as dictated by the current tactical situation.
- Coordinate and execute requests for J-SEAD support from the JFACC.
- Synchronize the ground commander's scheme of maneuver with the JFACC's air support and facilitate the exchange of operational and intelligence data.
- Coordinate J-SEAD operations aboard an airborne battlefield command and control center, when required.
- Assist with integrating and validating of J-SEAD intelligence requirements.

BCE plans division: assist combat plans in developing the ATO to meet J-SEAD requirements.

BCE operations division: work directly with TACC's combat operations division to execute the ATO, including J-SEAD requirements, and coordinate changes to J-SEAD as the tactical situation dictates.

Element: fire support element

Function: operations

Responsibilities:

- Ensure that the commander's guidance and Army support requirements are integrated into the overall fire support plan.
- Coordinate J-SEAD EW and intelligence support.
- Plan fires for those fire support systems under corps or division control.
- Task subordinate units to provide SEAD support to the corps or division.
- Direct attacks on J-SEAD targets of opportunity based on established priorities and availability of attack means.
- Coordinate fire support assets under corps control for J-SEAD.
- Maintain current targeting information and prepare the J-SEAD portion of plans and orders in coordination with other staff elements.
- Provide overall coordination of the fire support effort with Air Force elements through direct interface with the G3 air, Army airspace command and control (A²C²) element, and the ASOC.
- Interface with the ASOC for immediate target nomination input for J-SEAD.
- Provide the BCE with J-SEAD mission results.

Element: G2 section

Function: intelligence

Responsibilities:

- Receive, integrate, and validate requirements for J-SEAD intelligence.
- Develop intelligence requirements and direct the MI brigade or battalion (CEWI) to provide support for J-SEAD. Target requirements include priorities, time frames, general and specific locations, and enemy situations and coordination instructions.

- Task organic and subordinate intelligence units for J-SEAD intelligence support.
- Help the fire support element prepare the J-SEAD portion of the operations order.
- Receive correlated intelligence (all source) from the all-source production section (ASPS) and develop an intelligence situation assessment of the J-SEAD mission area.
- Provide the intelligence situation assessment to the commander, G3, FSCoord, ASOC, subordinate and/or lateral units, and BCE.
- Ensure the timely exchange of intelligence information among the corps TOC support element/division TOC support element (CTOCSE/DTOCSE), ASOC, and BCE.
- Inform subordinate units and internal TOC staff elements of any order-of-battle changes affecting SEAD missions.
- Provide target nominations to the fire support element.
- Deconflict J-SEAD targets and intelligence collection.

Element: corps tactical operations center support element/division tactical operations center support element

Function: intelligence

Responsibilities:

- Translate G2 intelligence requirements into tasking instructions for CEWI units.
- Task intelligence collection systems to validate, confirm, and improve target location accuracy and provide target identification and data.
- Process and integrate information from all sources (division, corps, national agencies, other services) for J-SEAD target development.
- Disseminate J-SEAD targeting information immediately to the fire support element and G3 air through the G2/S2 representative.
- Process and integrate information from all sources. Correlate this data with information on

terrain, enemy doctrine, and enemy capabilities to produce a near real time intelligence assessment for J-SEAD operations.

- Disseminate the intelligence assessment to the TOC, ASOC, subordinate units, and BCE.
- Advise the G3 and fire support element on EW support requirements for J-SEAD missions.
- Provide guarded frequencies as determined by the G3 through the signal office to corps and division elements.
- Coordinate EW support.
- Coordinate with the fire support element and G3 on EW tasks.

Element: communications-electronics (C-E) section

Function: communications

Responsibilities:

- Advise the G2/G3 and supporting organizations of those frequencies that must be protected from interference.
- Advise the G3 on the status and feasibility of using suitable tactical C-E equipment in conjunction with SEAD operations.
- Coordinate use of the electromagnetic spectrum for communications with the ASOC.

Element: collection management and dissemination section

Function: intelligence

Responsibilities:

- Translate G2 intelligence requirements into tasking instructions for intelligence and electronic warfare (IEW) collection systems.
 - Task organic and subordinate intelligence units to validate, confirm, and improve target accuracy and provide target identification.
 - Disseminate the intelligence assessment to the TOC, ASOC, subordinate units, and BCE.
 - Disseminate J-SEAD targeting information immediately to the fire support element and G3 air.
-

Element: all-source production section

Function: intelligence

Responsibilities:

- Process and integrate information from all sources (division, corps, national agencies, other services) for J-SEAD target development.
 - Correlate this data with information on terrain, enemy doctrine, and enemy capabilities to produce a near real time intelligence assessment for J-SEAD operations.
-

Element: electronic warfare center

Function: electronic warfare

Responsibilities:

- Advise the G3 and fire support element on electronic support requirements for J-SEAD missions.
 - Coordinate with the FSCC and G3 on EW tasks; recommend targets and advise the commander and staff on electronic countermeasures effectiveness.
-

Element: technical control analysis element (TCAE)

Function: intelligence

Responsibilities:

- Provide guarded frequency recommendation to corps and division G2/signal officer.
 - Task subordinate IEW assets to support J-SEAD operations.
 - Develop, maintain, and provide a technical data base to support EW operations.
-

Table A-2. Marine Corps MATGF Elements

Element: MAGTF command element

Function: command

Responsibility: Delegate tasking for J-SEAD operations to the ACE and GCE for planning, coordination, and execution. Once a J-SEAD requirement is confirmed, the MAGTF command element authorizes the request.

Element: aviation combat element

Function: command

Responsibilities:

- Provide the required functions of Marine aviation and direction and guidance of the MAGTF.
- Plan, integrate, and direct the employment of the air assets assigned for the J-SEAD.
- Publish the ATO and other tasking directives.
- Coordinate J-SEAD planning activities with the G2 intelligence sections of the ACE and the GCE, as well as with other air components within the joint force.
- Forward J-SEAD requests to the MAGTF command element for approval.

Element: aviation combat element G2

Function: intelligence

Responsibilities:

- Receive, integrate, and validate intelligence requirements for J-SEAD.
- Develop and direct the collection and coordination of intelligence information regarding J-SEAD activities.
- Correlate and develop intelligence situation assessments of the J-SEAD operation area.
- Ensure timely coordination with the GCE intelligence officer and other air components.

Element: ACE operations plans section

Function: operations

Responsibilities:

- Plan the J-SEAD operation execution and ensure that guidance and air support requirements are integrated into MAGTF operations.
- Coordinate the operational and intelligence support required for J-SEAD operations.

Element: tactical air command center

Function: command

Responsibility: Plan and execute the J-SEAD operations of the ATO for MAGTF air assets or other air components, as well as coordination with the GCE or other components.

Element: tactical air operations center

Function: control

Responsibility: Coordinate and execute the positive control of aircraft within the amphibious objective area (AOA), entering the AOA, transiting, or departing the AOA for J-SEAD operations.

Element: direct air support center

Function: control

Responsibility: Coordinate and execute the procedural control of aircraft passed to and from the TAOC until the J-SEAD operations are passed to and from a terminal controller of the J-SEAD for execution.

Element: ground combat element

Function: command

Responsibilities:

- Plan, integrate, and direct the employment of the ground force assets for execution of J-SEAD operations.
- Publish fire plans and other tasking directives.
- Coordinate J-SEAD planning activities with the ACE.

Element: GCE intelligence section

Function: intelligence

Responsibilities:

- Receive, integrate, and validate requirements for J-SEAD.
- Develop and direct the collection and coordination of intelligence information regarding J-SEAD activities.
- Correlate and develop intelligence situation assessments of the J-SEAD operation area.
- Ensure timely coordination with the ACE intelligence section or other components.

Element: fire support coordination center

Function: operations

Responsibilities:

- Plan J-SEAD operations and ensure that guidance and all fire support requirements (ground and air) are integrated into the MAGTF operations.
- Coordinate the operational and intelligence support required for J-SEAD operations.

Element: tactical air control party

Function: control

Responsibility: Coordinate and execute the terminal control of aircraft within the AOA for the execution of J-SEAD operations.

Table A-3. Air Force TACC Elements

Element: tactical air control center director

Function: operations

Responsibilities:

- Coordinate J-SEAD matters with the director of combat intelligence (DCi) and all other TACC staff sections, as well as with the BCE, to ensure all aspects of the J-SEAD mission are considered.
- Coordinate with the BCE and coordinating liaison elements to ensure understanding of multi-service operational J-SEAD requirements and objectives.
- Recommend to the AFCC the priorities for allocating critical resources for the J-SEAD effort.
- Determine requirements for J-SEAD.
- Plan, integrate, and direct offensive EW activities by subordinate units.
- Monitor the J-SEAD effort.
- Task assigned airborne platforms to support air operations as required.

Element: combat plans division

Function: operations

Responsibilities:

- Plan employment of assigned forces. Prepare course of action for decision based on JFACC or other commander's guidance.
 - Publish the ATO and other tasking documents including the airspace control order (ACO).
 - Establish C³ protection priorities and finalize C³ protection required for transmissions via ATO to supporting assets.
-

Element: electronic combat planning branch

Function: operations

Responsibilities:

- Coordinate SEAD planning activities with other TACC agencies, the BCE and coordinating liaison elements, and the MI group (CEWI and all source analysis center [ASAC]).
- Assist other TACC branches (fighter, recon, special operations) with matters related to J-SEAD combat plans.
- Monitor appropriate resources in support of J-SEAD tasking, to include electronic support measures, electronic countermeasures, and electronic counter-countermeasures.
- Participate in the target nomination cycle with the target branch.
- Prepare J-SEAD input for the briefing at the commander's conference.
- Prepare the electronic combat portion (including J-SEAD) of the ATO.
- Act as the central point for frequency deconfliction in the TACC.

Element: combat operations division

Function: operations

Responsibilities:

- Ensure that guidance and air support requirements are integrated into overall daily air operations.
 - Coordinate operational and intelligence support committed to J-SEAD.
 - Provide overall coordination of J-SEAD with supporting elements through direct interface with BCE and coordinating liaison elements.
 - Maintain communications with the airborne C² (if available) for near real-time situation updates.
 - Update J-SEAD target coordinates through intelligence sources to provide tasked units with the most current targeting and threat information.
-

Element: electronic combat duty officer

Function: operations

Responsibilities:

- Integrate and monitor J-SEAD assets in support of mission objectives.
- Coordinate with the enemy situation correlation division (ENSCD) analysts to nominate immediate SEAD targets.
- Receive immediate requests from the other services. Coordinate support requests with TACC duty officers, the BCE, and other liaison officers.
- Coordinate with the airspace control center for airspace management of all SEAD assets.
- Make J-SEAD recommendations to the electronic combat planning branch for future ATOs.
- Maintain contact with the airborne C³ intelligence element for information updates.

Element: director of combat intelligence

Function: intelligence

Responsibilities:

- Receive, integrate, and validate intelligence requirements for J-SEAD.
- Develop intelligence collection requirements and direct the collections management branch to provide support for J-SEAD.
- Direct subordinate units to provide intelligence information regarding J-SEAD activities.
- Correlate intelligence from all sources and develop an intelligence situation assessment of the J-SEAD mission area.
- Provide the intelligence situation assessment to combat plans, combat operations, ASOC, and subordinate organizations.
- Ensure the timely exchange of intelligence between the TACC and other components.

- Provide target nominations to the combat plans division and the combat operations division. Forward recommendations to the JTCB.
- Ensure exchange of intelligence between the airborne C assets and the TACC.

Element: combat intelligence division (CID)

Function: intelligence

Responsibilities:

- Locate and track the movement of enemy air defenses.
- Direct the collection efforts of Air Force sensor systems.
- Request support from Army and national intelligence systems.
- Nominate targets to the AFCC for inclusion in the ATO.
- Provide target nominations to DC I for the JTCB.
- Coordinate with the combat plans division in the TACC regarding combat aircraft, support, and munitions.

Element: enemy situation correlation division

Function: intelligence

Responsibilities:

- Identify and nominate targets to combat operations division for immediate attack.
 - Assist combat operations division in determining the availability of aircraft and ordnance to service immediate targets.
-

Element: coordinating liaison element*

Function: operations

Responsibilities:

- Coordinate with the Tactical Air Control System or the appropriate component equivalent system.
- Interface and coordinate with other component liaison elements.
- Identify and coordinate its component SEAD plans for all tactical air requests within range of its SEAD assets.
- Monitor and ensure execution of J-SEAD operations as specified.
- Coordinate and execute changes to planned J-SEAD operations as dictated by the tactical situation.
- Coordinate and execute requests for J-SEAD support from the JFACC.
- Assist with the integration and validation of intelligence requirements for J-SEAD.

*This element will be found at the JFACC's TACC.

GLOSSARY

AACP

Alaskan Air Command pamphlet

AAWC

antiair warfare commander

A²C²

Army airspace command and control

ACC

air component commander

ACE

aviation combat element [USMC]

ACO

airspace control order

adverse weather aerial delivery system (AWADS)

the precise delivery of personnel, equipment, and supplies during adverse weather, using a self-contained aircraft instrumentation system without artificial ground assistance or the use of ground navigational aids. This system may be used with or without radar beacons. AWADS capability exists on a limited number of C-130 aircraft. (FM 100-27/AFM 2-50)

AFCC

Air Force component commander

AFR

Air Force regulation

AFSOC

Air Force special operations component

AFSOCC

Air Force special operations control center

airborne battlefield command and control center (ABCCC)

an EC-130 aircraft with expanded communications and a battle staff designed to coordinate tactical air operations. (TAC-XPJ)

air defense

all defensive measures designed to destroy attacking enemy aircraft or missiles in the earth's envelope of atmosphere, or to nullify or reduce the effectiveness of such attacks. (JCS Publication 1-02)

air interdiction

air operations conducted to destroy, neutralize, or delay the enemy's military potential before it can be brought to bear effectively against friendly forces, at

such distance from friendly forces that detailed integration of each air mission with the fire and movement of friendly forces is not required. (JCS Publication 1-02)

air liaison officer (ALO)

an officer (aviation/pilot) attached to a ground unit who functions as the primary adviser to the ground commander in air operation matters. (JCS Publication 1-02)

ALCC

airlift control center

ALCE

airlift control element

ALD

airlift division

ALDO

airlift duty officer

ALE

Army liaison element

ALFA

Air Land Forces Application Agency

ALFI

air-land forces interface

allocation (tactical air support resources)

the translation of the apportionment into total numbers of sorties by aircraft type available for each operation/task. (JCS Publication 1-02)

allocation of forces

the designation of specific units and other resources to subordinate commands to carry out a given tactical scheme. Designation may include assignment, attachment, or operational control (OPCON), or direct support (DS), direct support reinforcing, and general support (GS). (FM 101-5-1)

AO

area of operations

AOA

amphibious objective area

apportionment (tactical air support resources)

the determination and assignment of the total expected effort by percentage and/or geographic areas for a given period of time. (JCS Publication 1-02)

AREC

air resources element coordinator

Army group

several field armies under a designated commander. (JCS Publication 1-02)

ASOC

air support operations center [USAF]

ASPS

all-source production section

ASWC

antisurface warfare commander

ATDL

air tactical data link

ATO

air tasking order

AWACS

airborne warning and control system

AWADS

adverse weather aerial delivery system

BAI

battlefield air interdiction

battlefield coordination element (BCE)

the BCE formalizes Army liaison at the TACC. It integrates the theater ground situation into the tactical air support management process. The element also replaces and expands Army liaison element (ALE) functions. The BCE assures that the TACC and JFACC are aware of the theater ground situation. For this reason, it serves as an expeditor and interpreter of information—both from the Army to the Air Force and vice versa. As part of the planning process, the JFC provides an integrated battlefield air interdiction (BAI) target list and reconnaissance requirements to the JFACC. The BCE, however, acts in those situations where time or lack of communications prevents consultation with the joint commander. It also consolidates and provides the corps prioritized BAI target lists and reconnaissance requirements to the JFACC for execution. (FM 100-103)

BCE

battlefield coordination element

bde

brigade

C²

command and control

C³

command, control, and communications

C³

command, control, and communications countermeasures

CACDA

Combined Arms Center Development Activity

campaign plan

a plan for a series of related military operations aimed to accomplish a common objective, normally within a given time and space. (JCS Publication 1-02)

campaign plan SEAD

preplanned, theaterwide efforts conducted concurrently with other air and ground campaigns against air defense systems that are normally located well behind enemy lines.

CAS

close air support

CCT

combat control team

CE

command element [USMC]

C-E

communications-electronics

CEWI

combat electronic warfare intelligence

CID

combat intelligence division

CINC

commander in chief

CINCMAC

commander in chief, Military Airlift Command

CLE

coordinating liaison element

close air support (CAS)

air action against hostile targets which are in close proximity to friendly forces and which requires detailed integration of each air mission with the fire and movement of those forces. (JCS Publication 1-02)

co

company

COA

course of action

COCOM

combatant command

COMAFSOC

commander, Air Force special operations command

COMALF

commander of airlift forces

combatant command (COCOM)

the authority of a combatant commander to perform those functions of command over assigned forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction over all aspects of military operations, joint training, and logistics necessary to accomplish the missions assigned to the command. COCOM should be exercised through the commanders of subordinate organizations; normally this authority is exercised through the service component commander. COCOM provides full authority to organize and employ commands and forces as the CINC considers necessary to accomplish assigned missions. (JCS Publication 1-02)

combat control team (CCT)

a team of Air Force personnel organized, trained, and equipped to establish and operate navigational or terminal guidance aids, communication, and aircraft control facilities in support of tactical airlift operations. (MAC Regulation 55-141)

Compass Call

an electronic combat version of the C-130H aircraft designated as EC130-H. Contains electronic equipment designed to jam enemy communications.

complementary suppression

suppression engagements conducted by aircraft in self-defense and the offensive attack against surface-to-air targets of opportunity by other weapon systems.

component command

the component commander and all those individuals, units, detachments, organizations, or installations under the component commander's military command which have been assigned to the operational command of the commander of the unified command. Also referred to as a SERVICE COMPONENT COMMAND or Army, Navy, or Air Force Component Command. (JCS Publication 0-2)

component commander

the senior officer of each service assigned to a unified command (except for the unified commander and members of his joint staff) and qualified for command by the regulations of his service unless another officer is so designated by competent authority. (JCS Publication 0-2)

CONPLAN

concept plan

coordinating liaison element

the coordinating liaison element formalizes at the JFACC TACC level of staff. It integrates the theater component situation into the tactical air support management process. The coordinating liaison element ensures that the TACC, or component equivalent staff, and JFACC are aware of the respective theater component situations. For example, if the JFC designated the Air Force as the JFACC, then the Navy and Marines would provide appropriate coordinating liaison elements to the TACS/AAGS system. If, however, the Navy was designated as the JFACC, then the Air Force and Marines would provide coordinating liaison elements, and the Army BCE would work for the Navy JFACC.

corridor

a path starting on the friendly side of the FLOT, extending beyond and returning to the FLOT within which aircraft fly routes to and from and attack on a specific set of ground targets.

COSCOM

corps support command

CRC

control and reporting center

CRP

control and reporting point

CSCF

chief of staff, United States Air Force

CSSE

combat service support element [USMC]

CTOCSE

corps TOC support element

CWC

composite warfare commander

DASC

direct air support center [USMC]

DCI

director of combat intelligence

deception

those measures designed to mislead the enemy by manipulation, distortion, or falsification of evidence to induce him to react in a manner prejudicial to his interests. (JCS Publication 1-02)

deep operations

deep operations comprise activities directed against enemy forces not in contact and designed to influence the conditions in which future close operations will be conducted. (FM 100-5)

destructive means

military action employed to physically damage or destroy enemy surface-to-air systems or personnel. (TRADOC Pamphlet 525-9 and TAC Pamphlet 50-24)

direct fire

gunfire delivered on a target using the target itself as a point of aim for either the gun or the director. (JCS Publication 1-02)

DISCOM

division support command

disruptive means

military action employed to damage, degrade, deceive, delay, or neutralize enemy surface-to-air systems temporarily. There are two types of disruptive means: active and passive. Active includes jamming, chaff, flares, and tactics such as deception and avoidance/evasion flight profiles. Passive includes camouflage, infrared shielding, warning receivers, and material design features. (TRADOC Pamphlet 525-9 and TAC Pamphlet 50-24)

div

division

DOD

Department of Defense

DTOCSE

division TOC support element

EAC

echelons above corps

echelon

separate level of command. (JCS Publication 1-02)

echelons above corps (EAC)

Army headquarters and organizations that provide the interface between the theater commander (joint or combined) and the corps for operational matters, and between the continental United States (CONUS)/host nation and deployed corps for combat service support (CSS). Operational EAC may be US only or allied headquarters, while EAC for CSS will normally be US national organizations. (CACDA)

electromagnetic spectrum

the frequencies (or wave lengths) present in a given electromagnetic radiation. A particular spectrum could include a single frequency or a wide range of frequencies. (JCS Publication 1-02)

electronic combat (EC)

a specialized task performed by aerospace forces to control selected parts of the electromagnetic spectrum in support of strategic and tactical operations. EC includes EW, as well as elements of C³ and SEAD. (AFM 1-1)

electronic warfare (EW)

military action involving the use of electromagnetic energy to determine, exploit, reduce, or prevent hostile use of the electromagnetic spectrum and action which retains friendly use of the electromagnetic spectrum. Also called EW. There are three divisions within electronic warfare:

a. **electronic countermeasures** that division of electronic warfare involving actions taken to prevent or reduce an enemy's effective use of the electromagnetic spectrum. Also called ECM. Electronic countermeasures include—

- (1) **electronic jamming** the deliberate radiation, reradiation, or reflection of electromagnetic energy for the purpose of disrupting enemy use of electronic devices, equipment, or systems. See also jamming.
- (2) **electronic deception** the deliberate radiation, reradiation, alteration, suppression, absorption, denial, enhancement, or reflection of electromagnetic energy in a manner intended to convey misleading information and to deny valid information to an enemy or to enemy electronics-dependent weapons. Among the types of electronic deception are—
 - (a) **manipulative electronic deception** actions to eliminate revealing, or convey misleading, telltale indicators that may be used by hostile forces.

(b) **simulative electronic deception** actions to represent friendly notional or actual capabilities to mislead hostile forces.

(c) **imitative electronic deception** the introduction of electromagnetic energy into enemy systems that imitates enemy emissions.

b. **electronic counter-countermeasures** that division of electronic warfare involving actions taken to ensure friendly effective use of the electromagnetic spectrum, despite the enemy's use of electronic warfare. Also called ECCM.

c. **electronic warfare support measures** that division of electronic warfare involving actions taken under direct control of an operational commander to search for, intercept, identify, and locate sources of radiated electromagnetic energy for the purpose of immediate threat recognition. Thus, electronic warfare support measures provide a source of information required for immediate decisions involving electronic countermeasures (ECM), electronic counter-countermeasures (ECCM), avoidance, targeting, and other tactical employment of forces. Also called ESM. Electronic warfare support measures data can be used to produce signals intelligence (SIGINT), both communications intelligence (COMINT) and electronics intelligence (ELINT). (JCS Publication 1-02)

EMI

electromagnetic interference

ENSCD

enemy situation correlation division

EW

electronic warfare

EWC

electronic warfare coordinator

extraction zone (EZ)

a specified ground area upon which equipment or supplies are delivered by means of a jointly approved extraction technique from an aircraft flying in close proximity to the ground. (MACR 55-130)

FAC(A)

forward air controller (airborne) [USMC]

FACP

forward air control post

fire support

assistance to those elements of the ground forces which close with the enemy such as infantry and armor units, rendered by delivering artillery and mortars fire, naval gunfire, and close air support (CAS). Fire support may also be provided by tanks, air defense artillery, and Army aviation. (FM 105-5-1; see also AR 310-25)

fire support coordination

the planning and executing of fire so that targets are adequately covered by a suitable weapon or group of weapons. (JCS Publication 1-02)

fire support coordination line (FSCL)

a line established by the appropriate ground commander to ensure coordination of fire not under his control but which may affect current tactical operations. The fire support coordination line is used to coordinate fires of air, ground, or sea weapons systems using any type of ammunition against surface targets. The fire support coordination line should follow well defined terrain features. The establishment of the support coordination line must be coordinated with the appropriate tactical air commander and other supporting elements. Supporting elements may attack targets forward of the fire support coordination line, without prior coordination with the ground force commander, provided the attack will not produce adverse surface effects on, or to the rear of, the line. Attacks against surface targets behind this line must be coordinated with the appropriate ground force commander. Also known as FSCL. (JCS Publication 1-02)

fire support element (FSE)

the fire support element at division and corps controls all deep fires as part of the delivery function of deep targeting. It operates the Army Airspace Command and Control Element, coordinates Air Force support through the ASOC, and controls lethal and nonlethal fires.

FLOT

forward line of own troops

FM

field manual

FMFM

fleet Marine force manual

FMFRP

fleet marine force reference publication

forward air controller (FAC)

an officer (aviator/pilot) member of the tactical air control party who, from a forward ground or airborne position, controls aircraft in close air support of ground troops. (JCS Publication 1-02)

forward line of own troops (FLOT)

a line which indicates the most forward positions of friendly forces in any kind of military operation at a specific time. (JCS Publication 1-02)

forward observer

an observer operating with front-line troops and trained to adjust ground or naval gunfire and pass back battlefield information. (JCS Publication 1-02)

FSCC

fire support coordination center

FSCL

fire support coordination line

FSO

fire support officer

G2

intelligence staff officer

G3

operations staff officer

G4

logistics staff officer

GCE

ground combat element [USMC]

HQ

headquarters

IEW

intelligence and electronic warfare

immediate air support

air support to meet specific requests which arise during the course of a battle and which by their nature cannot be planned in advance. (JCS Publication 1-02)

immediate mission request

a request for an air strike on a target which by its nature could not be identified sufficiently in advance to permit detailed mission coordination and planning. (JCS Publication 1-02)

indirect fire

fire delivered on a target which is not itself used as a point of aim for the weapons or the director. (JCS Publication 1-02)

intelligence

the product resulting from the collection, processing, integration, analysis, evaluation, and interpretation of available information concerning foreign countries or areas. (JCS Publication 1-02)

interoperability

the ability of systems, units, or forces to provide services to and accept services from other systems, units, or forces and to use the services so exchanged to enable them to operate effectively together. (JCS Publication 1-02)

J2

director for intelligence

J3

director for operations

J5

director for plans and policies

JCS

Joint Chiefs of Staff

JF

joint force

JFACC

joint force air component commander

JFC

joint force commander

joint

connotes activities, operations, organizations, etc., in which elements of more than one service of the same nation participate. (JCS Publication 1-02)

joint force (JF)

a general term applied to a force which is composed of significant elements of the Army, the Navy or the Marine Corps, and the Air Force, or two or more of these services, operating under a single commander authorized to exercise unified command or operational control over joint forces. (JCS Publication 1-02)

joint force air component commander (JFACC)

the joint force air component commander derives his authority from the joint force commander who has the authority to exercise operational control, assign missions, direct coordination among his subordinate commanders, redirect and organize his forces to ensure unity of effort in the accomplishment of his overall mission. The joint force commander will normally designate a joint force air component commander. The joint force air component commander's responsibilities will be assigned by the joint force commander (normally these would include, but not be limited to, planning, coordination, allocation and tasking based on the joint force commander's apportionment decision). Using the joint force commander's guidance and authority, and in coordination with other service component commanders and other assigned or supporting commanders, the joint force air component commander will recommend to the joint force commander apportionment of air sorties to various missions or geographic areas. (JCS Publication 1-02)

joint operation

an operation carried on by two or more of the services of the United States. (AR 310-25)

joint suppression of enemy air defenses (J-SEAD)

a broad, all-encompassing term that includes all SEAD activities (unilateral and joint) that support the overall theater campaign plan of the joint force commander (JFC).

joint target list (JTL)

a consolidated list of select targets considered to have military significance in the joint operations area. (JCS Publication 1-02)

JRCC

joint rescue coordination center

J-SEAD

joint suppression of enemy air defenses

JTCB

joint targeting coordination board

liaison

that contact or intercommunication maintained between elements of military forces to ensure mutual understanding and unity of purpose and action. (JCS Publication 1-02)

LO

liaison officer

MAC

Military Airlift Command

MACCS

Marine Air Command and Control System

MACLO

Military Airlift Command liaison officer

MACP

Military Airlift Command pamphlet

MACR

Military Airlift Command regulation

MAG/CC

military airlift group commander [USAF]

MAGTF

Marine air-ground task force

MAJCOM

major command

maneuver

1. A movement to place ships or aircraft in a position of advantage over the enemy.
2. A tactical exercise carried out at sea, in the air, on the ground, or on a map in imitation of war.
3. The operation of a ship, aircraft, or vehicle, to cause it to perform desired movements.
4. Employment of forces on the battlefield through movement in combination with fire, or fire potential, to achieve a position of advantage in respect to the enemy in order to accomplish the mission. (JCS Publication 1-02)

MARLO

Marine Corps liaison officer

maximum effective range

the maximum distance at which a weapon may be expected to deliver its destructive charge with the accuracy specified to inflict prescribed damage. (JCS Publication 1-02)

MCC

movement control center

MCCDC

Marine Corps Combat Development Command

MCM

multicommand manual

MEB

Marine expeditionary brigade

MEF

Marine expeditionary force

MEU

Marine expeditionary unit

MI

military intelligence

mission

the task, together with the purpose, that clearly indicates the action to be taken and the reason therefore. (JCS Publication 1-02)

MMC

materiel management center

MPC

message processing center

NAF/CC

numbered air force commander [USAF]

NAVLO

Navy liaison officer

NCA

national command authority

NTDS

Naval Tactical Distribution System

observed

fire for which the point of impact or burst can be seen by an observer. The fire can be controlled and adjusted on the basis of observation. (JCS Publication 1-02)

OPCON

operational control

operation

a military action or the carrying out of a strategic, tactical, service, training, or administrative military mission; the process of carrying on combat, including movement, supply, attack, defense, and maneuvers needed to gain the objectives of any battle or campaign. (JCS Publication 1-02)

operational control (OPCON)

the authority delegated to a commander to perform those functions of command over subordinate forces involving the composition of subordinate forces, the assignment of tasks, the designation of objectives, and the authoritative direction necessary to accomplish the mission. OPCON includes directive authority for joint training. OPCON should be exercised through the commanders of assigned normal organizational units or through the commanders of subordinate forces established by the commander exercising operational control. OPCON normally provides full authority to organize forces as the operational commander deems necessary to accomplish assigned missions and to retain or delegate OPCON or tactical control as necessary. OPCON may be limited by function, time, or location. It does not, of itself, include such matters as administration, discipline, internal organization, and unit training. (JCS Publication 1-02)

operation plan (OPLAN)

a plan for single operation or a series of connected operations to be carried out simultaneously or in succession. It is usually based upon stated assumptions and is the directive employed by higher authority to permit subordinate commanders to prepare supporting plans and orders. The designation "plan" is usually used instead of "order" in preparing for operations well in advance. An operation plan may be put into effect at a prescribed time, or on signal, and then becomes the operation order. (JCS Publication 1-02)

operation order (OPORD)

a directive issued by a commander to subordinate commanders for the purpose of effecting the coordinated execution of an operation. (JCS Publication 1-02)

OPLAN

operation plan

OPORD

operation order

OPR

office of primary responsibility

PACAF

Pacific Air Forces pamphlet

preplanned airlift

requests generated to meet airlift requirements which can be forecast or where requirements can be anticipated and published in the air tasking order (ATO). (AFM 100-27/AFM 2-5)

preplanned air support

air support in accordance with a program planned in advance of operations. (JCS Publication 1-02)

preplanned mission request

a request for an air strike on a target which can be anticipated sufficiently in advance to permit detailed mission coordination and planning. (JCS Publication 1-02)

Rivet Joint

an airborne system for the intercept and direction finding of target nation communications signals, as well as noncommunications and radar signals.

rules of engagement (ROE)

directives issued by competent military authority which delineate the circumstances and limitations under which United States forces will initiate and/or continue combat engagement with other forces encountered. (JCS Publication 1-02)

S2

intelligence staff officer

S3

operations staff officer

SAF

secretary of the Air Force

SAM

surface-to-air missile

SEAD

suppression of enemy air defenses

SECDEF

secretary of defense

SF

special forces

special operations

operations conducted by specially trained, equipped, and organized DOD forces against strategic or tactical targets in pursuit of national military, political, economic, or psychological objectives. These operations may be conducted during periods of peace or hostilities. They may support conventional operations or they may be prosecuted independently when the use of conventional forces is either inappropriate or infeasible. (JCS Publication 1-02)

special operations forces (SOF)

forces, including Special Forces (SF), Rangers, psychological operations (PSYOP), civil affairs (CA), and special operations aviation (SOA) units. SOF perform missions requiring specialized capabilities across the full spectrum of conflict in a variety of operational environments. (TRADOC Pamphlet 525-34)

standoff target acquisition system

a heliborne MTI radar with all-weather target acquisition. A newer version will be able to indicate if a target has tracks or wheels. It will also provide power-link data to ground systems.

suppression of enemy air defenses (SEAD)

that activity which neutralizes, destroys, or temporarily degrades enemy air defenses in a specific area by physical attack and/or electronic warfare. (JCS Publication 1-02)

TA

theater army

TAC

Tactical Air Command; tactical air commander [USMC]

TACAIR

tactical air

TACC

tactical air control center [AF/USN]; tactical air command center [USMC]

TACP

tactical air control party; Tactical Air Command pamphlet

TACR

Tactical Air Command regulation

TACS

tactical air control system

tactical air operation (TACAIR)

an air operation involving the employment of air power in coordination with ground or naval forces to:

- a. gain and maintain air superiority.
- b. prevent movement of enemy forces into and within the objective area and to seek out and destroy these forces and their supporting installations.
- c. join with ground or naval forces in operations within the objective area, in order to assist directly in attainment of their immediate objective. (JCS Publication 1-02)

tactics

1. The employment of units in combat.
2. The ordered arrangement and maneuver of units in relation to each other and/or to the enemy in order to use their full potentialities. (JCS Publication 1-02)

TADIL

tactical digital information link

TAF

Tactical Air Forces

TALO

tactical airlift liaison officer

TAOC

tactical air operations center

TAR

tactical air request

target of opportunity

a target visible to a surface or air sensor or observer, which is within range of available weapons and against which fire has not been scheduled or requested. (JCS Publication 1-02)

TCAE

technical control analysis element

theater

the geographical area outside the continental United States for which a commander of a unified or specified command has been assigned military responsibility. (JCS Publication 1-02)

theater airlift

the movement of personnel and materiel by USAF aircraft which provides air movement and delivery of combat troops and supplies directly into objective areas through airlanding, extraction, airdrop, or other delivery techniques; also the use of air transport in direct support of airborne assault, carriage of air transported forces, resupply, and evacuation of casualties from forward airfields.

theater army (TA)

the Army component of a US unified command in a theater of operations. An echelon above corps (EAC) organization, it provides combat, combat support (CS), and combat service support (CSS) forces in the theater. It must be tailored for each theater. (JCS Publication 1-02)

theater commander

the overall commander of a theater. Commonly referred to as CINC, he is designated by the President in US unilateral theaters. Immediately subordinate to the theater commander are the service component commanders. In combined operations, the theater commander is appointed using procedures established in the political agreement which formed the combined theater. (CACDA)

TOC

tactical operations center

TRADOC

United States Army Training and Doctrine Command

UAV

unmanned aerial vehicle

USA

United States Army

USAF

United States Air Force

USAFEP

United States Air Forces Europe pamphlet

USCINCTrans

United States commander in chief, transportation

USMC

United States Marine Corps

unified command

a command with a broad continuing mission under a single commander and composed of significant assigned components of two or more services, and which is established and so designated by the President, through the Secretary of Defense with the advice and assistance of the Joint Chiefs of Staff, or when so authorized by the Joint Chiefs of Staff, by a commander of an existing unified command established by the President. (JCS Publication 1-02)

USN

United States Navy

WOC

wing operations center

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